



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	Design activities: continuous provision/ small group work Ongoing Assessment In all; share their creations, explaining the process they have used.	<u>All about me</u> <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. 	<u>Space</u> <ul style="list-style-type: none"> Exploring how things work such as pop-up books: traditional tales Make imaginative and complex small worlds with blocks and construction kits. Structures- rockets 	<u>Planets</u> <ul style="list-style-type: none"> Explore different materials. Develop their own ideas and then decide which materials to use to express them. Structures 	<ul style="list-style-type: none"> <u>Our Planet</u> Develop their small motor skills so that they can use a range of tools competently, safely and confidently. vehicles 	<u>Water</u> <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. Making boats 	<u>Under the sea</u> <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. Sea vehicles- wheels/ axles <p>Yearly Assessment: DT: check on skills</p>

Y1 Key vocab: planning, investigating design, evaluate,	<u>1</u>		Fire fire: Mechanisms- Cold task: pre- assessment: What do they know about pop ups from looking at books and cars in EYFS? pop ups and simple card levers	Growth and Green Fingers 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,		The Great outdoors- Structures- stability and strength Explore and talk about existing products: playground equipment for small world figures/ a chair for a storybook	
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make, user, purpose, ideas, product			Research existing products: record ideas of levers	squeezing, healthy diet, choosing, ingredients, Cold pre- assessment task: What do they know about food from EYFs- how do they chop different fruit? What do they need to remember to be safe? 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>		Year 1 and Year 2 D and T - KS1 Quizzes to Help You Learn (educationquizzes.com) : Designs and plans Quiz Design/ plan a product with a lever/ pop ups: Use this as a mini-assessment- to see if use prior skills.	Year 1 and Year 2 D and T - KS1 Quizzes to Help You Learn (educationquizzes.com) Food Quiz Design- use pictures and words to convey what they want to make. Propose more than 1 idea. Plan who are they making it for.		Year 1 and Year 2 D and T - KS1 Quizzes to Help You Learn (educationquizzes.com) materials 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: compare and improve End of unit assessment. In groups make a pop	Evaluate and compare: think how they can improve their product		Evaluate End of Year D/t assessment: create a story book about a	

			up book about the great fire of London.	In groups: design a fruit trolley to make kebabs for the school lunchtime pudding.		playground- with a pop up structure.	
	<u>6</u>						

Y2 Key vocab investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function	<u>1</u>			Explorers: mechanisms wheels and axles Pre- assessment: What have they learnt from mechanisms in EYFS and Y1? Linked to the space topic evaluate and look at vehicles linked to space exploration- lego can be used.	The Farm shop 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 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	Wind in the Willows Textiles Evaluation of existing 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>			Mini-assessment Quiz KS1 Machines How They Work and the Jobs They Do (educationquizzes.com)	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.	
				Think and plan- develop a design for a space vehicle with the pupils.			

	<u>4</u>			Select tools and make the vehicle	Mini- Assessment Quiz KS1 Design and Technology Food (educationquizzes.com) Select ingredients and make the product	Mini- Assessment Quiz KS1 Materials Textiles, Fabrics and Sewing (educationquizzes.com) Design product	
	<u>5</u>			Evaluation of the product: compare and think how they would improve their space buggy.	Evaluation of the product; taste tests.	Make product	
	<u>6</u>			<u>End of unit assessment:</u> <u>Create in a group a larger space buggy- one that could pick up space rocks on the moon.</u>	<u>End of unit assessment:</u> <u>create a salad trolley for school using knowledge of likes and dislikes of children in school- what they need to eat</u>	Evaluate and compare: how would they improve their product. <u>End of year: Design and Technology Assessment</u> <u>Design a car and food item in groups for a character in the wind in the willows- use knowledge of their textile skills.</u>	
Y3 user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing,	<u>1</u>	<u>Healthy Humans</u> 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,	.	<u>The Iron Man</u> Mechanical systems- levers and linkages Evaluate existing products: pop up books: moving posters/ storyboards with moving parts.			<u>How Does your garden grow</u> Structures- shell/ frame Evaluation of existing products: planters for growing products- esp for elderly users- window sillboxes. Containers for known products.

		edible, grown, reared, caught, frozen, tinned,					
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function, planning, design criteria, annotated sketch, appealing		processed, seasonal, harvested healthy/varied diet Pre Assessment task: recap on what they know about the eatwell plate from Year Two. Food Simple disheatwell plate Evaluate existing products: investigate food products on the market and record					
	<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>	<p>Draw up a design criteria: plan and develop an idea for a picnic food.</p> <p>Mini-assessment Quiz: for a balanced meal what needs to be on the plate? Design Quiz</p> <p>KS2 Design Planning Where to Start when Making Products (educationquizzes.com)</p>		<p>Design: plan a sequence of actions to make the product.</p> <p>Mini Assessment quiz</p> <p>KS2 Moving Parts Which Pieces of a System don't Stay Still (educationquizzes.com)</p>			<p>Design and plan a sequence of actions to make a product. Mini-Assessment quiz</p> <p>KS2 Structures How to Make Designs Strong and Stable (educationquizzes.com)</p>
	<u>4</u>	Design: test cooking small portions		Make the product			Make prototypes.
	<u>5</u>	Plan and make the product		<p>Evaluate the product made.</p> <p>End of unit assessment</p> <p>In pairs/ groups- make a large moving Iron man. Create a library display of their models</p>			Make product
				with information about books- invite another class/ parents to see.			

	<u>6</u>	<p>Evaluate and explain how to make the product better.</p> <p><u>End of unit Assessment: Design and make a poster in groups for a healthy lunchbox for the school- based on all the learning in the topic. To be put on the class dojo page.</u></p>					<p>Evaluate: compare-show how to make their product better.</p> <p>End of year assessment task</p> <p>In groups: make a large structure for the garden area, that has a lever. Make a picnic product to share as a celebration to have with parents to show their structures.</p>
<p>Y4</p> <p>evaluating, design brief, design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluations</p>	<u>1</u>	<p><u>Sparks Might Fly!</u></p> <p><u>Assessment task : quiz</u></p> <p>Ict and electrical systems</p> <p>Evaluation of existing products: quiz board/ buzzer systems</p>			<p><u>Passport to Europe</u></p> <p>Textiles</p> <p>Investigate similar products to the one to be made to give starting points for a design.</p> <p>Research needs of user.</p> <p>Draw/sketch products to help analyse and understand how products are made.</p>		<p><u>Hunted</u> 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</p> <p>healthy/varied diet</p> <p>Food</p> <p>Investigate similar products to be made</p>

							Research needs of users: food grown in different climates: food to sustain life- eatwell plate.
	<u>2</u>	Focused tasks: electrical tasks: bulbs, switches, buzzers			<p>Focused tasks □</p> <p>Develop vocabulary for tools, materials and their properties. □ Understand seam allowance.</p> <p>□ Join fabrics using running stitch, over sewing, blanket stitch.</p> <p>□ Prototype a product using J cloths.</p> <p>□ Use prototype to make pattern.</p> <p>□ Explore strengthening and stiffening of fabrics.</p> <p>□</p>		<p>Focused tasks Taste tests:</p> <p>Join and combine a range of foods.</p> <p>Farm visit- understand how animals are reared.</p>
	<u>3</u>	<p>Assessment quiz in books to show what they have learnt. KS2 Circuits How Switches Control Electricity (educationquizzes.com)</p> <p>Design and plan a sequence of actions</p>			<p>Focused Tasks □</p> <p>Explore fastenings (inventors?) and recreate some.</p> <p>□ Sew on buttons and make loops.</p> <p>□ Use appropriate decoration techniques. Mini Assessment Quiz: KS1 Materials Textiles, Fabrics and Sewing (educationquizzes.com)</p>		<p>Mini Assessment quiz KS2 Health and Safety How to Use Equipment Properly (educationquizzes.com): focus on hygiene</p> <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. 		<u>Make and evaluate</u> Plan a sequence of actions to make a dish. Record the plan.
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					<ul style="list-style-type: none"> □ Plan a sequence of actions to make a product. □ Record the plan by drawing using annotated sketches. 		
	<u>5</u>	Evaluation of their finished product: write how they would improve it. End of unit Assessment task: Make in groups a larger quiz for the whole school based on Geography countries or history dates. Decide whether it is for KS1 or KS2.			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. 		End of term assessment task: Make a quiz board in groups to show ingredients needed for a healthy recipe from this unit and learning.
	<u>6</u>				Evaluation of the product How could they improve it? End of unit assessment task. In pairs make a story bag for the EYFS children.		
					End of unit assessment		

Y5 design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative,	<u>1</u>			<u>Amazon Adventure</u> 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. □ Understand how key people have influenced design. 		<u>Inventors and Inventions</u> Mechanical systems- cams, pulleys and gears Evaluation of Existing Products <ul style="list-style-type: none"> □ Research and evaluate existing products (including 	<u>Food Glorious Food</u> ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten,
research, evaluate, design criteria, annotate, evaluate, mock-up, prototype				<ul style="list-style-type: none"> □ Identify the strengths and weaknesses of their design ideas 		book and web based research). <ul style="list-style-type: none"> □ Consider user and purpose. □ Identify the strengths and weaknesses of their design ideas. .	dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble <u>Pre-Assessment: What have they learnt from Food technology in years 3 and 4?</u> Food from other countries/ cultures for a festival/celebration. Evaluate and record about existing products. Taste, label and list ingredients.

	2			<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). 		<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. Use electrical systems such as motors. 	<p>Focused tasks Prepare food tasks taking accounts of ingredients and sensory characteristics. Taste tests</p>
				<ul style="list-style-type: none"> □ Combine fabrics to create more useful properties. □ Make quality products. □ 			


	<u>3</u>			<p>Mini- Assessment quiz Show different types of stitches for children to say what they are. Write 3 ways to combine fabrics. Design</p> <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. 	□	<p>Mini assessment Quiz KS2 Moving Parts Which Pieces of a System don't Stay Still (educationquizzes.com) Design</p> <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. 	<p>Mini- Assessment Quiz on food technology Design and plan- record ideas using annotated designs: plan the sequence</p>
	<u>4</u>			<ul style="list-style-type: none"> □ Use a computer to model ideas. □ Make prototypes. Develop one idea in depth 		<ul style="list-style-type: none"> □ Use a computer to model ideas. □ Make prototypes. Develop one idea in depth 	Make prototypes
	<u>5</u>			Make and adapt designs		Make and adapt designs	Develop one idea in depth
	<u>6</u>			Refine and evaluate products		Refine and evaluate products	Refine and evaluate products.

				<u>End of unit Assessment Task</u> <u>In groups make a 3d textile art work based on saving the Amazon.</u>		<u>End of unit Assessment Task In</u> <u>pairs make a mechanical system based on learning from Islamic Inventors</u>	<u>End of year Assessment task</u> <u>Whole class project to show parents on ways to slow down climate change- plant based food/ moving invention and show their 3d textile work.</u>
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Y6 function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype	<u>1</u>			Heroes and Villains 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 Evaluation of existing products <input type="checkbox"/> Start by researching the work of chefs such as Jamie Oliver and his influence on school meals. <input type="checkbox"/> 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. <input type="checkbox"/> Consider what appeals to the pupils and where this possibly		Oh I do Like to be beside the Seaside Evaluation of existing products: Fairground rides and illuminations <input type="checkbox"/> Explore existing products; if possible, consider a visit to the illuminations storage depot in Blackpool or visit to Skegness. <input type="checkbox"/> Use web-based research for other examples around the world. <input type="checkbox"/> Focus in this part of the project on the mechanism and lights. <input type="checkbox"/> Draw and annotate.
				conflicts with the ethos of the eatwell plate.		

	<u>2</u>			<p><u>Focused Tasks</u></p> <ul style="list-style-type: none"> ❑ 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. ❑ Show awareness of a healthy diet (using the eatwell plate). 		<p><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><u>Mini Assessment Quiz</u></p> <p>KS2 D and T - 10 Enjoyable Quizzes for Children aged 7 to 11 (educationquizzes.com): moving parts and structures Quizzes</p> <p>Session 4: Design</p> <p>Session 5: Make: develop 1 idea from prototypes: test at each stage.</p> <p>Session 6: make and evaluate</p>
	<u>3</u>			<p><u>Focused Tasks</u></p> <p><u>Mini assessment Quiz</u></p> <p>https://www.educationquizzes.com/ks2/d-and-t/design-andplanning</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. 		

				<ul style="list-style-type: none"> ❑ 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. 		<p>End of year assessment: in pairs/ groups make a fairground ride/ illumination for Skegness. When it is all put together as a class-display and invite another class-preparing recipes that would be eaten at the seaside: make healthier versions from earlier unit learning.</p>
	4			<p style="text-align: center;"><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> <p>Make the complete dish, following their final recipe. Use and apply 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.</p> <p>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>						