

Early Years Foundation Stage									
	Expressive Arts and Design Physical Development								
	rerequisite skills for design technology within	the national curriculum							
ELG	Creating with materials	Fine Motor Skills							
	 Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. Make use of props and materials when role playing characters in narratives and stories. 	 Use a range of small tools, including scissors, paintbrushes and cutlery. Begin to show accuracy and care when drawing. 							
Key vocabulary	plan, soft, hard, paper, card, tissue paper,	cut, scissors, paintbrush, cutlery, knife, fork, spoon, pencil, pen, crayon,							

Across KS1 nunils should explore									
	 what products are 								
		• wł	o products are for						
		• wh	at products are for						
		• ho	ow products work						
		• hov	v products are used						
		• where I	products might be used						
		• what materi	als products are made fro	om					
		• what they lik	e and dislike about produ	ıcts					
		Year 1 St	kills and Knowledge	2					
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process (one that includes a repeated cycle of operations) of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].									
Design	Design Make Evaluate Technical knowledge Cooking and nutrition Additional								
Learn the importance of a clear	• Make stable	Test a finished product,	• To understand that the shape	• To understand that some foods	To know that a client is the person I				
design criteria	structures from card,	seeing whether it moves	of materials can be changed to	typically known as vegetables	am designing for				
				and a second second second second second second second					

Explain how to adapt mechanisms	• Learn how to turn	explaining why and	• To understand that cylinders	• To know that a blender is a	• To know that design criteria is a
Design a moving story	2D nets into 3D	how it can be fixed	are a strong type of structure	machine which mixes	list of points to ensure the product
book for a given audience	structures	Reviewing the success	(e.g. the main	ingredients together into a	meets the clients needs and wants
Use templates to create a design	 Follow instructions 	of a product by testing	shape used for windmills and	smooth liquid	 To know that a windmill
Design a vehicle that includes	to cut and assemble	it with its intended	lighthouses)	• To know that a fruit has seeds	harnesses the power of wind for a
wheels, axles and axle holders,	the supporting of a	audience	• To begin to understand that	and a vegetable does not	purpose like grinding grain,
which will allow the wheels to	structure	Reflect on a finished	different structures are used	• To know that fruits grow on	pumping water or generating
move	Make functioning	product, explain likes	for different purposes	trees or vines	electricity
Create clearly labelled drawings	turbines and axles	and dislikes	•To know that a slider	• To know that vegetables can	• To know that windmill turbines
which illustrate movement	which are assembled	• Test mechanisms,	mechanism moves an object	grow either above or below	use wind to turn and make the
	into a main	identifying what stops	from side to side	ground	machines inside work
	supporting structure	wheels from turning,	• To know that a slider	• To know that vegetables can	 To know that a windmill is a
	Follow a design to	knowing that a wheel	mechanism has a slider, slots	come from different parts of the	structure with sails that are moved
	create moving models	needs an axle in order	, guides and an object	plant (e.g.	by the wind
	that use levers and	to move	 To know that 'joining 	roots: potatoes, leaves: lettuce,	• To know the three main parts of a
	sliders		technique' means connecting	fruit: cucumber	windmill are the turbine, axle and
	• Cut fabric neatly		two pieces of material	Chop fruit and vegetables	structure
	with scissors		together	safely to make a smoothie	 To know that in Design and
	• Use joining methods		• To know that drawing a	• Learn where and how fruits	technology we call a plan a 'design'
	to decorate		design idea is useful to see	and vegetables grow	• To know some real-life items that
	• Sequence steps for		how an idea will look	• Taste and evaluate different	use wheels such as wheelbarrows,
	construction		• To know that wheels need to	food combinations	hamster wheels and vehicles
	• Adapt mechanisms		be round to rotate and move	• Describe appearance, smell and	
			• To understand that for a	taste	
			wheel to move it must	 Suggest information to be 	
			be attached to a rotating axle	included on packaging	
			• To know that an axle moves	, , , , , , , , , , , , , , , , , , , ,	
			within an axle holder which is		
			fixed to the vehicle or toy		
			• To know that the frame of a		
			vehicle (chassis)		
			needs to be balanced		
			Key Vocabulary		
planning, investigating design,	planning,	planning, investigating	cut, fold, join, fix structure,	Blender, carton, fruit, healthy,	
evaluate, make, user, purpose,	investigating design,	design, evaluate, make,	wall, , weak, strong, base, top,	ingredients, peel, peeler, recipe,	
ideas, product,	evaluate, make, user,	user, purpose, ideas,	underneath, side, edge,	slice, smoothie, vegetable,	
	purpose, ideas,	product,	surface, thinner, thicker, point,	sensory vocabulary e.g. soft,	
	product,		straight, curved, metal, wood,	juicy, crunchy, sweet, sticky,	
			plastic circle, triangle, square,	smooth, sharp, crisp, sour, hard	

		rectangle cylinder	e, cuboid, cube, flesh, ski slicing, p squeezin choosing	n, seed, pip, core, eeling, cutting, g, healthy diet, , ingredients,							
	Year 2 Skills and Knowledge										
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process (one that includes a repeated cycle of operations) of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. design purposeful, functional, appealing products for themselves and other users based on design criteria design purposeful, functional, appealing of tools and equipment to perform practical tasks design and range of materials and components, including construction materials, textiles and ingredients design build structures, exploring how they can be made stronger, stiffer and more stable how to cook and apply the principles of nutrition and healthy eating											
Design	Make	Evaluate	Technical knowledge	Cooking and nutri	tion Additional						
 Learning the importance of a clear design criteria Including individual preferences and requirements in a design Create a class design criteria Design a for a specific audience in accordance with a design criteria Designing a healthy foods based on a food combination which work well together 	 Make stable structures from card, tape and glue Learning how to turn 2D nets into 3D structures Follow instructions to cut and assemble that supports a structure Make linkages using card for levers and split pins for pivots Experiment with linkages adjusting the widths, lengths and thicknesses of card used Cut and assemble components neatly Select and cut fabrics for sewing Decorate using fabric glue or running stitch Thread a needle Sew running stitch, with evenly spaced, neat, even stitches to join fabric 	 Evaluate own designs against design criteria Use peer feedback to modify a final design Evaluate which grip was most effective Troubleshoot scenarios posed by teacher Evaluate the quality of the stitching on others' work Discus as a class, the success of their stitching against the success criteria Identify aspects of their peers' work that they particularly like and why 	 To understand that the shape of materials can be changed to improve the strength and stiffness of structure. To understand that cylinders are of structure (e.g. the most shape used for windmills and lighthouses) To understand that axles are used structures and mechanisms to make parts turn in a circle To begin to understand that differ structures are used for different purposes To know that a structure is somet that has been made and put togeth To know that mechanisms are a collection of moving parts that wor together as a machine to produce movement To know that there is always an i and output in a mechanism 	To know that 'diet' means t food and drink that a perso animal usually eats To understand what make balanced diet To know where to find the nutritional information on in packaging To know that the five mai groups are: Carbohydrates, protein, dairy and foods hig fat and sugar To understand that I shou a range of different foods fir each food group, and roughly how much of e food group To know that nutrients ar substances in food that all things need to make	:he • To know that a client in or is the person I am designing for • To know that design es a • To know that design criteria's are a list of points to ensure the product meets the client's needs and wants in food • To know some real-life fruits • To know some real-life objects that contain mechanisms gh in uld eat re living						

	1	l		1 1 1	1
	 Neatly pin and cut fabric using a 		• To know that an input is the energy	energy, grow and develop	
	template		that is used to start something working	 To know that 'ingredients' 	
			 To know that an output is the 	means the items in a mixture or	
			movement that happens as a result of	recipe	
			the input	 To know that I should only have 	
			• To know that a lever is something that	a maximum of five teaspoons of	
			turns on a pivot	sugar a day to	
			• To know that a linkage mechanism is	stay healthy• Describe the taste,	
			made up of a series of levers	texture and smell of fruit and	
			To know that sewing is a method of	vegetables	
			joining fabric	-	
			• To know that different stitches can be	 To know that many food and 	
			used when sewing	drinks we do not expect to contain	
			• To understand the importance of tying	sugar do; we call	
			a knot after sewing the final stitch	these 'hidden sugars'	
			• To know that a thimble can be used to	 Construct food that meets a 	
			protect my fingers when sewing	design	
				Slice food safely using the bridge	
				or claw grip brief	
				Taste testing food combinations	
				and final products	
				• Describe the information that	
				should be included on a label	
	•	Key Voco	ıbulary		1
Plan/design	joining and finishing techniques,	planning, investigating	cut, fold, join, fix, structure, wall,	Diet, balanced diet, expensive,	
investigating, planning, design,	tools, fabrics and components,	design, evaluate, make, user,	tower, framework, weak, strong, base,	healthy, ingredients, nutrients,	
make, evaluate, user, purpose,	template, pattern pieces, mark out,	purpose, ideas, product,	top, underneath, side, edge, surface,	packaging, refrigerator, sugar,	
ideas, design criteria, product,	join, decorate, finish stable, stiff,		thinner, thicker, corner, point, straight,	substitute	
function	strong, test, weak		curved, metal, wood, plastic circle,		
,	5.		triangle, square, rectangle, cuboid,		
			cube, cylinder, lever, mechanical,		
			mechanism, motion, pivot, axel vehicle,		
			wheel, axle, axle holder, chassis, body,		
			cab assembling, cutting, joining,		
			shaping, finishing, fixed, free, moving,		
			mechanism names of tools, equipment		
			and materials used		
	In	early KS2 pupils should al	so investigate and analyse:		
		 who designed and 	made the products		
		titte accegitoa arta			

	 where products were designed and made 									
	 when products were designed and made 									
		• whether products o	an be recycled or reused							
	Year 3 Skills and Knowledge									
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process (one that includes a repeated cycle of operations) of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. use design criteria to inform the design of innovative, functional, appealing products that are fit for purpose generate, model and communicate their ideas through discussion and annotated sketches select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties investigate a range of existing products evaluate their ideas and products against their own design criteria to improve their work apply their understanding of how to strengthen more complex structures understand and use mechanical systems in their products understand and use mechanical systems in their products										
Design	Make	Evaluate	Technical knowledge	Cooking and nutrition	Additional					
 Problem solving by suggesting potential features on a Micro: bit and justifying my ideas Drawing and manipulating 2D shapes, using computer-aided design Developing design criteria from a design brief Learning that different types of drawings are used in design to explain ideas clearly. To know that exploded- diagrams are used to show how different parts of a product fit together. 	 Construct a range of 3D geometric shapes using nets Create special features for individual designs Make products from a range of recycled materials Create a pneumatic system to create a desired motion Select materials due to their functional and aesthetic characteristics Manipulate materials to create different effects by cutting, creasing, folding, weaving Following design criteria to create a product 	 Use the views of others to improve designs Test and modify the outcome, suggesting improvements Understand the purpose of exploded-diagrams through the eyes of a designer and their client Evaluate an end product and thinking of other ways in which to create similar items Analyse and evaluate an existing product 	 To understand that wide and flat based objects are more stable To understand the importance of strength and stiffness in structures To understand how pneumatic systems work To understand that pneumatic systems can be used as part of a mechanism To know that pneumatic systems operate by drawing in, releasing and compressing air 	 Follow the instructions within a recipe Know how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination Describe the benefits of seasonal fruits and vegetables and the impact on the environment Suggest points for improvement when making a food To know that not all fruits and vegetables can be grown in the UK To know that climate affects food growth To know that vegetables and 	 To know that a paper net is a flat 2D shape that can become a 3D shape once assembled To know that a design specification is a list of success criteria for a product To understand how sketches, drawings and diagrams can be used to communicate design ideas To know that exploded-diagrams are user to show how different parts of a product fit together To know that thumbnail sketches are small drawings to get ideas down on pape quickly To know that applique is a way of mending or decorating a textile by 					

	• Select and cut fabrics with		To understand that in	• To know that cooking	smaller pieces of fabric
	ease using fabric scissors		programming a 'loop' is code	instructions are known as a	•To know that when two edges of fabric
	• Thread needles with greater		that repeats something	'recipe'	have been joined together it is called a
	independence		again and again until	 To know that imported food is 	seam
	 Tie knots with greater 		stopped	food which has been brought into	•To know that it is important to leave
	independence		 To know that a Micro:bit is 	the country	space on the fabric for the seam
	 Sew cross stitch to join fabric 		a pocket-sized, codable	 To know that exported food is 	•To understand that some products are
	 Decorate fabric using appliqué 		computer	food which has been sent to	turned inside out after sewing so the
	 Complete design ideas with 		 Writing a program to 	another country.	stitching is hidden
	stuffing and sewing the edges		control (button press)	• To understand that imported	•To know what the 'Digital Revolution' is
	Using a template when cutting		and/or monitor (sense light)	foods travel from far away and	and features of some of the products
	and assembling the product		that	this can negatively impact the	that have evolved as a result
	• Follow a list of design		will initiate a flashing LED	environment	• To know that in Design and technology
	requirements		algorithm	• To know that each fruit and	the term smart means a programmea
	• Select and using the			benefits because they contain	To know the difference between analogue
	for cutting joining shaping and			vitaming minerals and fibre	and digital technologies
	decorating a product			• To understand that vitamins	• To understand what is meant by 'point o
	Applu functional features such			minerals and fibre are important	sale displau'
	as using foam to create soft			for energy,	• To know that CAD stands for Computer-
	buttons			growth and maintaining health	aided design
				• To know safety rules for using,	5
				storing and cleaning a knife safely	
				 To know that similar coloured 	
				fruits and vegetables often have	
				similar nutritional benefits	
				Establish and use design criteria	
				to help test and review dishes	
		Key '	Vocabulary		
user, purpose, design, model,	joining and finishing	user, purpose, design,	shell structure, three-	name of products, names of equ	ipment, utensils, techniques and
evaluate, prototype, annotated	techniques, tools, fabrics and	model, evaluate, prototype,	dimensional (3-D) shape,	ingredients, taste, sweet, sour, h	ot, smell, greasy, cook, fresh, hygienic,
sketch, functional, innovative,	components, template,	annotated sketch,	net, cube, cuboid, prism,	grown, frozen, tinned, processed	d, harvested healthy/varied diet
investigate, label, drawing,	pattern pieces, mark out,	functional, innovative,	vertex, edge, face, length,		
function, planning, design	join, decorate, finish	investigate, label, drawing,	width, breadth, capacity,		
criteria, annotated sketch,		function, planning, design	marking out, scoring,		
appealing		criteria, annotated sketch,	shaping, tabs, adhesives,		
		appealing	joining, assemble,		
			accuracy, material, stiff.		
			strong, reduce, reuse.		
			recucle corrugating		
			ribbing laminating font		
			ribbing, laminating, font,		

			lettering, text, decision,	graphics,						
Year 4 Skills and Knowledge										
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process (one that includes a repeated cycle of operations) of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. develop design criteria to inform the design of functional, appealing products that are fit for purpose generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes and computer-aided design select from and use a wider range of tools and equipment to perform practical tasks select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties investigate and analyse a range of existing products apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use electrical systems in their products [for example, gears, pulleys, cams, levers and linkages] understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] 										
Design	Make	Evaluate	Technical knowledge	Cooking and nutrition	Additional					
Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effec • Building frame structures designed to support weight • Draw a not to create a	Create a range of different shaped frame structures • Make a variety of free standing frame structures of different shapes and sizes • Select appropriate materiale to build a	 Evaluate structures made by the class Describe what characteristics of a design and construction made it the most effective Consider effective and ineffective designs Evaluate the speed of a 	 To understand what a frame structure is To know that a 'free-standing' structure is one which can stand on its own To understand that all moving things have kinetic energy To understand that kinetic energy is the energy that something 	 Follow a baking recipe Cook safely, following basic hygiene rules Adapt a recipe Follow a list of design requirements Design food within a given budget, drawing upon previous taste testing 	 To know that a pavilions is a decorative building or structure for leisure activities To know that cladding can be applied to structures for different effects. To know that aesthetics are how a product looks To know that a product's function means its purpose To understand that the target audience means the person or group of people a product is designed for 					

pavilion structure that	different shaped frame	by the class	structure is	 Cook safely, following basic 	structure for leisure activities
is aesthetically pleasing	structures • Make a	 Describe what 	 To know that a 'free-standing' 	hygiene rules	• To know that cladding can be applied to structures for
and selecting materials	variety of free standing	characteristics of a design	structure is one which can stand on	• Adapt a recipe	different effects.
to create a desired effect	frame structures of	and construction made it	its own	Follow a list of design	 To know that aesthetics are how a product looks
 Building frame 	different shapes and	the most effective	 To understand that all moving 	requirements	 To know that a product's function means its purpose
structures designed to	sizes	 Consider effective and 	things have kinetic energy	Design food within a given	 To understand that the target audience means the person
support weight	 Select appropriate 	ineffective designs	 To understand that kinetic energy is 	budget, drawing upon	or group of people a
• Draw a net to create a	materials to build a	 Evaluate the speed of a 	the energy that something	previous taste testing	product is designed for
structure from	strong structure	final product based on: the	(object/person) has by being in	• Evaluate a recipe,	 To know that architects consider light, shadow and
 Choose shapes that 	 Reinforce corners to 	effect of shape on speed	motion	considering: taste, smell,	patterns when designing
increase or decrease	strengthen a structure	and the accuracy of	 To understand that the shape of a 	texture and appearance	 To understand that products change and evolve over
speed as a result of air	• Create a design in	workmanship on	moving object will affect how it moves	 Describe the impact of the 	time
resistance	accordance with a plan	performance	due to air resistance	budget on the selection of	 To know that aesthetics means how an object or product
• Personalise a design	 Learn to create 	 Evaluate electrical 	.• To understand that electrical	ingredients	looks in design and technology
 Give consideration to 	different textural effects	products	conductors are materials which	 To know that the amount of 	 To know that a template is a stencil you can use to help
the target audience and	with materials	 Test and evaluate the 	electricity can pass through	an ingredient in a recipe is	you draw the same shape
creating both design	 Measure, marking, 	success of a final product	To understand that electrical	known as the 'quantity'	accurately
and success criteria	cutting and assemble	and taking inspiration	insulators are materials which	 To know that it is important 	 To know that a birds-eye view means a view from a high
focusing on features of	with increasing	 Evaluate and comparing 	electricity cannot pass through	to use oven gloves when	angle (as if a bird in flight)
individual design ideas	accuracy	a range of products			

Write design criteria for	• Make a model based on	• Suggest modifications	• To know that a battery contains	removing hot food from an	• To know that graphics are images which are designed to
a product articulating	a chosen design	• Test and evaluate an end	stored electricity that can be used to	oven	explain or advertise
decisions made	Making a working	product against the	nower products	• To know the following	something
Applu the results of mu	electrical circuit and	original design criteria	• To know that an electrical circuit	cooking techniques: sieving	•To know that it is important to assess and evaluate
research to further	switch	• Decide how many of the	must be complete for electricity to	creaming rubbing method	design ideas and models against a list of design criteria
inform mu design	• Use appropriate	criteria should be met for	flow	cooling	• To know facts from the history and invention of the
criteria	equipment to cut and	the product to be	• To know that a switch can be used	•To understand the importance	electric light hulb(s) - hu Sir Josenh Swan and Thomas
· Davalon a prototuna	attach materials	considered successful	to complete and break an electrical	of hudgeting while planning	Edison
• Develop a product	· Assemble products	· Suggest modifications for	circuit	ingradiants for food	Luison
cuse for product	• Assemble products	· Suggest monifications joi	To know that a factoring is	ingreatents for jood	that a prototype is a 2D model made out of shoan
• Ose and alingst	and every an aritaria	Articulate the	• To know that a justening is		materiale, that allows up
snapes and clipart,	Make and test a name	• Articulate the	something which holds two pieces of		Ta test design idens and make better desisions about size
design (CAD) to meduce	• Make and test a paper	davantages and	material together for example a		•10 test design ideas and make better decisions about size,
design (CAD), to produce	template with accuracy	disdavantages of different	zipper, toggie, button, press stud and		shape and materials
a logo	and in keeping with the	fastening types			
	design criteria	• Evaluate my micro:bit	• To know that different fastening		
	Measure, mark and cut	program against points on	types are useful for different purposes		
	fabric using a paper	my design criteria and	• To know that creating a mock up		
	template	amending them to include	(prototype) of their design is useful		
	• Select a stitch style to	any changes I made	for checking ideas and proportions		
	join fabric, working	 Document and evaluate 	• To understand what variables are in		
	neatly sewing small	my project	programming		
	neat stitches	 Understand what a logo 	 To know some of the features of a 		
	 Incorporate fastening 	is and why they are	Micro:bit		
	to a design	important in the world of	 To know that an algorithm is a set 		
	 Develop a prototype 	design and business	of instructions to be followed by the		
	 Create a 3D structure 	 Test my program for bugs 	computer		
	using a net • Program a	(errors in the code) • Find	 To know that it is important to 		
	micro:bit in the	and fix the bugs (debug) in	check my code for errors (bugs) • To		
	Microsoft micro:bit	my code	know that a simulator can be used as		
	editor, to time a set	-	a way of checking your code works		
	number of		before installing it onto an electronic		
	seconds/minutes upon		device		
	button press				
	· · ·		Key Vocabulary		
evaluating, design brief	fabric, names of fabrics,	evaluating, design brief design	shell structure, three-dimensional (3-D)	name of products, names of equipme	nt, utensils, techniques and ingredients texture, taste, sweet, sour,
design criteria, innovative,	fastening, compartment,	criteria, innovative, prototype,	shape, net, cube, cuboid, prism, vertex, edge,	hot, spicy, appearance, smell, prefere	ence, greasy, moist, cook, fresh, savoury, hygienic, edible, grown,
prototype, user, purpose,	zip, button, structure,	user, purpose, function,	face, length, width, breadth, capacity,	reared, caught, frozen, tinned, proces	ssed, seasonal, harvested healthy/varied diet
function, prototype, design	finishing technique,	prototype, design criteria,	marking out, scoring, shaping, tabs,		
criteria, innovative,	strength, weakness,	innovative, appealing, design	aanesives, joining, assemble, accuracy,		
uppealing, design brief,	sujjening, templates, stitch,	shetch sensory evaluations	material, stiff, strong, reduce, reuse, recycle,		
sensory evaluations	seum, seum allowance	skeich, sensory evaluations	lettering text graphics decision		
sensory evaluations	L	1	ienering, ieni, gruphics, uecision,		

Year 5 Skills and Knowledge									
	In late k	(S2 pupils should also inve	stigate and analyse:						
		 how much products cos 	st to make						
		• how innovative prod	ucts are						
	• ho	w sustainable the materials	s in products are						
	• what im	pact products have beyond	their intended purpose						
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process (one that includes a repeated cycle of operations) of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].									
Design	Make	Evaluate	Technical knowledge	Cooking and nutrition	Additional				
• Design a stable structure that is able to support weight	 Independently measuring and marking wood accurately Select appropriate tools and equipment for 	• Adapt and improve own structures by identifying points of weakness and	 To understand some different ways to reinforce structures To understand how triangles can 	• To understand where meat comes from - learning that beef is from cattle and how	To understand how to carr J an saw safely • To know that a design br ef is				
• Create frame structure with focus on	• Use the correct techniques to saws safely	 reinforcing them as necessary Suggest points for 	• To know that properties are words	beef is reared and processed, including key welfare issues	description of what I am going design and make • To knov tha				

that describe the form and function

• To understand why material selection is important based on their

of materials

properties

• To know that I can adapt a

recipe to make it healthier by

substituting ingredients

designers often want to hive mechanisms to make a product

aesthetically pleasing

by others

improvements for own products and those designed

reinforcement and using card corners for

• Identify where a structure needs

support

triangulation

structures and

mechanisms

• Design a pop-up book

which uses a mixture of

 Name and methody and uptut across metrics is an important part of the dispussion is a proper track for the transmost of the dispussion of the LDD and the LDD and						
 input and output accurating process input and output accurating process input and output accurating process Suggest points for process Suggest points for process Suggest points for process input and output accurating process process input and output accurating process process input and output accurating process	 Name each mechanism, 	 Explain why selecting appropriating 	 Evaluate the work of others 	 To understand the material 	 To know that I can use a 	 To know that product an ilysis
 uccurately Storyboard idees for a boat Storyboard idees for a boat Obeging an electronic greatings card with a coper tractor that diagram showing positive and negative parts in the lt ED and the battery Wate a dising criteria and negative parts in electronic greating card, for an electronic greati	input and output	materials is an important part of the design	and receiving feedback on own	(functional and aesthetic) properties	nutritional calculator to see	critiquing the strengths and
 Sturgboard lates for a book Obegins an electronic greatings can write a greatings can write a greating service and write year and the post of the activities activity of the a	accurately	process	work	of wood	how healthy a food option is	weaknesses of a product
 bok Design on electronic greatings card with a comportation charactic circuit and comportation charactic circuit and condition circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit circuit	 Storyboard ideas for a 	 Understand basic wood functional 	 Suggest points for 	 To know that mechanisms control 	 To understand that 'cross- 	 To know that 'mass production
 Design an electronic greetings and what one design brief to make a pop up greetings and what oper track circuit and great with an oper and folds to product and suggesting modifications that and negative parts in relation to the LDD and negative parts in relation to the LDD and negative parts in relations to the LDD and negative parts in relations to the LDD and negative parts in relations to the LDD and the the disgn or relation are atorized at the the stations of the disgn or relation are atorized at the the stations of the disgn or relation are atorized the make to import the disgn or relation and and spatial scale and excluse are and product and a diplotic accurately and independently. Adapt a traditional ingredients - Create and scale that stitch to join fightic curvarial and discover allow are and a diplotic accurately and independently. Create strain and scale that stitch to join fightic curvarial and and spatial independently. Create strain and scale that the for indication and a cashetic independently. Create strain and scale that the for indication and a spatial independently. Create strain and scale that the for indication and a cashetic independently. Create strain and scale that the for indication and a spatial independently. Create strain and scale that the form for the discover has a strain that the strain and the prose and scale and scale that the form for the discover has a strain that a strain the strain is a strain that a strain the strain is a strain that	book	properties	improvement	movement	contamination' means that	when a product is made in large
 greatings card with a components Group entrops card with a components Make a functional series circuit Group entrops card with a components Make a functional series circuit Group entrops card with a components Make a functional series circuit Group entrops card with a components Make a functional series circuit Group entrops card endiates Make a functional series circuit Group entrops card endiates Make a functional endiagn card endiates Group entrops card endiates Group entrop	• Design an electronic	 Follow a design brief to make a pop up 	 Evaluate a peer's product 	 To understand that mechanisms 	bacteria and germs have been	quantities by a machine, usually
 comports circuit and comports contained of the transforments contained and parts for an each to the LED and regarding parts in ration to the LED and regarding parts in ratio ratio the design criteria for an eactronic greating for an electronic greating ratio and this prepare when the sign in ratio ratio the LED and regarding parts in ratio ratio the LED and regarding parts in ratio ratio the lease in ratio rati ratio ratio ratio ratio ratio ratio ratio rati ratio ratio	greetings card with a	book, neatly and with focus on accuracy	against design criteria and	that can be used to change one kind	passed onto ready-to-eat foods	factory
 and negative parts in components is a labeled circuit components in a labeled circuit component in a labeled circii component in la	copper track circuit and	• Make mechanisms and/or structures using	suggesting modifications that	of motion into another	and it happens when these	•To know that one-off productio
 create a labeled circuit diagram showing positive pars in and negative pars in and negative pars in and negative pars in and negative pars in a casthetical pleasing result. Write a daign criteria Adapt a traditional value of a create a quacteristic greeting card recipes a canders tay go a create a source source and participation of the CD and the additional ingreliants of incorporate accurate a good source banket stitche when different components of the isance accurate good source of a create a dual tabenet a create a dual tabenet of a create a dual tabenet of a create a dual tabenet of a create a dual tabenet dual tabenet a create a dual tabenet a create a dual tabenet of a create a dual tabenet dual tabenet dual tabenet dual tabenet a create a dual tabenet	components	sliders, pivots and folds to produce	could be made to improve the	• To understand how to use sliders,	foods mix with raw meat or	when only one of a product is m
 I diagram showing positive and spaces to hide he workings of mechanical parts circuit comporte and negative parts in relation to the LED and relation to the relation to the relation to the LED and relation to the relation to the relation to the LED and relation to the relation to the LED and relation to	• Create a labelled circuit	movement	reliability or aesthetics of it or	pivots and folds to create paper-	unclean objects	by hand
 and negative parts in relation to the LED and the battery Write a design criteria design criteria cardinate are activation greating or a design criteria or design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (inclusing hive a fightern components of a design criteria (independentily) Create a Jostuffied to for a neales independentily Create a Jostuffied to join fabric Apply blanket stitch b o jin fabric Create a mane defig for a nericular of partice for a nericular of partice for a nericular of partice for a nericular of a nericular of a nericular of a nericular of a nortice of partice for a	diagram showing positive	 Use layers and spacers to hide the 	to incorporate another type of	based mechanisms	 Identify the nutritional 	• To know that 'bespoke' means
 relation to the LB and the battery Write a design criteria for an electronic greeting card Adapt a traditional recipe. understanding the design criteria or and carb based on research the nutritional value of recipe and manescape schemaging the nutritional value of recipe and manescape schemaging the nutritional value of recipe and value on recipe and value	and negative parts in	workings of mechanical parts for an	circuit component	• To know the key components used	differences between different	product was made for a porticu
 He battery Write a design criteria Adpt a traditional recipe understand the design criteria Adpt a traditional recipe understand information value of a singer of existing greating cards Adpt a traditional recipe understand information value of a singer of existing greating cards Adpt a traditional recipe understand information value of a singer of existing greating cards Adpt a traditional recipe understand information value of a singer of existing greating cards Adpt a traditional recipe understand information value of a singer of existing greatering cards Adpt a traditional ingreations Write a mended Meass encre blanket stitchs or the space batweet or fact from particular changes to ingredients Besign appealing packaging to reflect a recipe to incorporate the relevant changes to ingredients Polesign appealing to reflect a recipe to intervine for a particular (lawer) Powerstand what a virtual model is and the pros and cans of plastics Powerstand what a virtual model is and the prosen created for a certain pacetage or induction in particular (lawer) Powerstand what a virtual model is and the pros and cans of plastics Powerstand what a virtual model is and the prosen created for a certain pace poervises of jobric (lawer) Powerstand what a virtual model is and the prosen created for a certain pace or inducting and walte a virtual model is and the prosen created for a certain parpose or job and that monitoring devices of parts in a discusse merver of a condition or in the soft to is is strong and sources of a parpose or job and that a virtual model is and the prosen created for a certain parpose or job and that a series circuit and in parpose in a const is traditional and sources of parts in a discusse merver of a const to a discusse merver of a const to a virtual model is and the prose and cans of the constituent of a certain parpose or job and that a vi	relation to the LED and	aesthetically pleasing result	• State what Sir Rowland Hill	to create a functioning circuit	products and recipes	reason or person
 Write a design criteria for an electronic greeting card, referring to a design criteria (arcard) Adapt a traditional rectarding that the nurtitional value of a rectar different components of the nurtitional value of a recipe the number of the second different components of the incortion of the second different components in a base of a rectar different component in a base of a rectar different component in a basis earlies and independently Write an amended method for a recipe to incorporate the relevant changing to reflect a receipe a receipe a precising to reflect a receipe a r	the battery	• Make a functional series circuit	invented and why it was	• To know that copper is a conductor	 Identify and describe healthy 	• To understand the development
 Adapt a traditional recipe, inderstanding that recipe independently Create a 3D stiffel to give from a 2D design independently Create a 3D stiffel to give from a 2D design independently Create a 3D stiffel to give from a 2D design independently Create a 3D stiffel to give from a 2D design independently Create a 3D stiffel to give from a 2D design independently Create a 3D stiffel to give from a 2D design independently Create a 3D stiffel to give from a 2D design independently Create a 3D stiffel to give from a 2D design independently Create a 3D stiffel to give from a 2D design independently Sew blanket stitch to join fabric Apply blanket stitch to fight a trach degendently Sew blanket stitch to fight independently Create a frequence sequence independently Sew blanket stitch to give from a 2D design independently Sew blanket stitch to give from a recipe of the functional and estretic Orderstand what a visual Create a frequence sequence independently Sew blanket stitch to give from a regular Sew blanket stitch to give from a 2D design in reteria Obserstand wh	• Write a design criteria	• Create an electronics greeting card,	important for greeting cards	and can be used as part of a circuit	benefits of food groups	personal message exchange thro
 and a chard of a raditional recipe, understanding that the nutritional value of a create all suffiged and independently created for a create all suffiged is independently of the section of the states is group and exchanging of a create strong and secure blanket stitches are aven and regular. besting packaging to reflect a recipe (second) frage intermet) for a particular (user's) for a maticular (user's) for a metaded mothed a virtual model is and the prose and regular. create and manoauver 3D objects, using CAD change the properties of protecting of traditional and conso for traditional and conso fo	for an electronic greeting	referring to a design criteria	• Analyse and evaluate a	• To understand that breaks in a	• Cut and prepare vegetables	the invention of the Penny Black
 Adapt a traditional recipe. understanding that the nutritional value of a recipe. Substitute or add additional ingredients Write an amended additional ingredients Write an amended additional ingredients Write an amended method for a recipe to incorporate the relevant changes to ingredients Sew blanket stitch so are seen and regular Sew blanket stitch to join fobric Sew blanket stitch so are seen and regular Oracte an and evaluate and excurse blanket is offection on the fut source that he joins of particular (user's) animal's needs Develop design criteria based on research. Oracte and and the pros and comporting on a dots on the fut source that is degred and the pros and cons o tradition are including programmed features Oracte and evaluate and excurse blanket is offecting action in my product source or job and that monitoring devices observe and record Sow blanket stitch a genes and more more of plastics Oracte and evaluate and excurse blanket stitch is of prostress of plastics Sow blanket stitch a genes and the functional and aesthetic properties of plastics Oracte and maneauver 3D objects, using CAD Change the properties of comporting a portex and more more apporterias of comporting and comporting and base study for an anticipation of that a series of plastics Develop design criteria based and the pros and comporting the prosenties of plastics Oracte and maneauver 3D objects, using CAD Change the properties of comporting the prosenties of for a certain purpose or job and that monitoring devices observe and record Sow blanket study and a dat dat a series of a particular (and more support to a certain purpose or job and that monitoring devices observe and record So how that a series of a particular (and more support is a dotter) and the prosent is a dotter prosent is a dotter prosent is a dotter and suggesting a comparitive t	card	• Map out where different components of the	range of existing greeting	circuit will stop it from working	safely	stamp, and exchanging of greeti
 c-reate a 25 stuffed tog from a 2D design the nutritional value of a recipe alters if gou remove, substitute or add additional ingredients - Write an amended method for a recipe to changes to ingredients - Design or research - Develop design criteria based on research - Develop design criteria based on research - Develop design criteria based on research - Develop design criteria based and manuella (AD modelling - Place and maneeture 3D objects, using CAD - Change the properties of, or combine one or more 3D objects, using CAD - Change the properties of, or combine one or more 3D objects, using CAD c-reate a 25 stuffed tog from a 2D design - Measure, mark and cut fabric accurately and independently - Create strong and secure blanket stitches when incorporate the relevant changes to ingredients - Develop design criteria of, or combine one or more 3D objects, using CAD c-reate a 25 stuffed tog from a 2D design - Measure, mark and cut fabric accurately and independently - Create strong and secure blanket stitches when incorporate the relevant changes to ingredients - Seearch (books, intersent) for a particular (user's) animal's needs - Develop design criteria based on research - Understand the fut, second corporaticular (user's) animal's needs - Develop design criteria based con research - Understand what a virtual model ing - Place and maneeuver 3D objects, using CAD changes the properties of, or combine on or more 3D objects, using CAD changes the properties of, or combine on or more 3D objects, using CAD change the properties of or combine or or more 3D objects, using CAD change the properties of or combine on or more and the properties of or combine or or more and the proventies of or combine or or more and the pr	 Adapt a traditional 	circuit will go	cards	• To understand that a series circuit	• Use equipment safely,	cards
 the nutritional value of a recipe alters if you remove, substitute or add additional ingredients Wreta an amedda for a recipe to incorportat the relevant changes to ingredients Besearch (books, internet for a particular (user's) animal's needs Develop design or research • Duderstand what a virtual modelling Place and manoeuvre 3D objects, using CAD Change the properties of, or combine one or more 3D objects, using CAD Change the properties of, or combine one or more 3D objects, using CAD 	recipe, understanding that	• Create a 3D stuffed toy from a 2D design	• Test and evaluate an end	only has one path for the electrical	including knives, hot pans and	• To understand key developmen
recipe alters if you remove, substitute or add additional ingredients ·Write an amended method for a recipe to incorporte the relevant changes to ingredients · Design appealing packaging to reflect a recipe ·Research (books, internet) for a particular (user's) animal's needs ·Develop design criteria based on research - Understand what a virtual model is and the pros and cons of traditional and CAD modelling ·Place and manœuver 3D objects, using CAD ·Change the properties of, or combine one or more 3D objects, using CAD ·Change the properties of, or combine one or more 3D objects, using CAD	the nutritional value of a	• Measure, mark and cut fabric accurately	product and giving point for	current to flow from positive to	hobs	thermometer history
 remove, substitute or add additional ingredients Write an amended for a recipe to incorporate the relevant of parts in dependently Use applique to attach pieces of fabric changes to ingredients - Design appealing packaging to reflect a recipe Research (books, internet) for a particular (user's) animal's needs Develop design criteria Place and manoeuvre 3D objects, using CAD Change the properties of , or combine one or more Develop tests. Apple blance Additional and CAD Change the properties of , or combine one or more Substitute or additional indices. Change the properties of properties of properties of placts: Change the properties of properties of placts: Change the properties of placts: Change the properties of places and manoeuver 3D objects, using CAD Change the properties of properties of properties of properties of place and manoeuver 3D objects, using CAD Change the properties of properties of place to change the properties of properties of properties of place to change the properties of p	recipe alters if you	and independently	further improvements	negative	• Know how to avoid cross-	• To know events or facts that to
 additional ingredients Write an amended When joining fabric Thread needles independently Use applique to attach pieces of fabric Apply blanket stitch to join fabric Apply blanket stitch of the space between the stitches are even and regular Understand what a virtual Develop design criteria based on research Understand what a virtual model is and the pros and CAD modelling Place and manoeuvre 3D Place and manoeuvre 3D Change the properties of, or combine one or more 3D objects, using CAD Change the properties of, or combine one or more SD objects, using CAD 	remove, substitute or add	• Create strong and secure blanket stitches	• State an event or fact from	• To know that we use symbols to	contamination	place over the last 100 years in
 Write an amended method for a recipe to incorporate the relevant changes to ingredients - Design appealing packaging to reflect a recipe Research (books, interett) for a particular (user's) animal's needs Develop design criteria based on research - Understand the pros and cons of plastics Develop design criteria based on research - CAD modelling Develop design criteria based on research - Understand and active of plastics Develop design criteria based on research - CAD modelling Place and manceuvre 3D objects, using CAD Change the properties of, corportise on or more Sub construction of the properties of, or combine one or more Develop design criteria based on research (SAD worke a corporate the relevant cons or traditional and active properties of plastics Develop design criteria based on research (SAD worke a corporate the relevant cons of traditional and active properties of plastics Develop design criteria or properties of plastics Develop design criteria and the pros and cons of traditional and active properties of plastics Develop design criteria or properties of plastics Develop design criteria and the pros and cons of traditional and active properties of plastics Develop design criteria and the pros and cons of traditional and active properties of plastics Develop design criteria and the pros and cons of traditional and active properties of plastics Develop design criteria and the pros and cons of traditional and active properties of raditional and active properties of raditional and cons of traditional and active properties of of a criteria based construction of the properties of of a criteria based construction of the properties of of a criteria based construction of the properties of of a criteria based construction of traditonal and the prosent t	additional ingredients	when joining fabric	the last 100 years of plastic	represent components in a circuit	 Follow a step by step 	history of plastic, and how this
 method for a recipe to incorporate the relevant changes to ingredients - Design appealing packaging to reflect a recipe Research (books, internet) for a particular (user's) animal's needs Develop design criteria Desegon due the functional and aesthetic properties of plastics Develop design criteria Dased on research - Understand what a virtual model is and the pros and cons of traditional and CAD modelling Place and manoeuvre 3D objects, using CAD Change the properties of, or combine one or more 3D objects, using CAD Change the properties of, or combine one or more 3D objects, using CAD Use applique to attach pieces of fabric change the properties of, or combine one or more Use applique to attach pieces of fabric change the properties of, or combine one or more Use applique to attach pieces of fabric change the properties of, or combine one or more Develop design criteria objects, using CAD Change the properties of, or combine one or more Develop design criteria of, or combine one or more Develop design c	• Write an amended	• Thread needles independently	history	diagram	method carefully to make a	changing our outlook on the fut
 incorporate the relevant changes to ingredients - Design appealing packaging to reflect a recipe · See blanket stitch to join fabric · Apply blanket stitch so are even and regular · Understand the functional and aesthetic properties of plastics · Develop design criteria · Develop design criteria · Develop design criteria · Dave and manoeuvre 3D objects, using CAD · Change the properties of, or combine one or more 3D objects, using CAD 	method for a recipe to	• Use applique to attach pieces of fabric	 Know how plastic is affecting 	• To know the names of the	recipe	• To know the 6Rs of sustainabi
 changes to ingredients · Design appealing packaging to reflect a recipe · Sew blanket stitch so the space between the stitches are even and regular · Understand the functional and aesthetic properties of plastics · Develop design criteria based on research · Understand what a virtual model is and the pros and conso fraditional and cons of traditional and cons	incorporate the relevant	decoration	planet Earth and suggesting	components in a basic series circuit:		• To understand what a virtual
 Design appealing packaging to reflect a recipe Research (books, internet) for a particular (user's) animal's needs Develop design criteria based on research · Understand what a virtual model is and the pros and cons of traditional con	changes to ingredients •	 Sew blanket stitch to join fabric 	ways to make more	crocodile wires, LED (light-emitting		is and the pros and cons or trad
 packaging to reflect a recipe Research (books, internet) for a particular (user's) animal's needs Develop design criteria based on research • Understand what a virtual model is and the pros and cons of traditional and cast program (addible and the pros and cons of traditional and CAD modelling Place and manoeuver 3D objects, using CAD Change the properties of Doiects. using CAD Change the p	Design appealing	• Apply blanket stitch so the space between	sustainable choices	diode), battery holder, battery, cell		vs CAD modelling
 recipe Understand the functional and aesthetic properties of plastics Research (books, internet) for a particular (user's) animal's needs Develop design criteria based on research • Understand what a virtual model is and the pros and cons of traditional and accombine one or more 3D objects, using CAD Change the properties of or combine one or more 3D objects, using CAD Change the properties of or combine one or more 3D objects, using CAD 	packaging to reflect a	the stitches are even and regular	• Explain key functions in my	• To know that blanket stitch is		• To know that a 'device' n eans
 Research (books, internet) for a particular (user's) animal's needs Develop design criteria based on research • Understand what a virtual model is and the pros and CAD modelling Place and manoeuvre 3D objects, using CAD Change the properties of, or combine one or more 3D objects, using CAD 	recipe	• Understand the functional and aesthetic	program (audible alert,	useful to reinforce the edges of a		equipment created for a certain
 internet) for a particular (user's) animal's needs Develop design criteria based on research • Understand what a virtual model is and the pros and cons of traditional and CAD modelling Place and manoeuvre 3D objects, using CAD Change the properties of, or combine one or more 3D objects, using CAD 	• Research (books,	properties of plastics	visuals)	fabric material or join two pieces of		purpose or job and
(user's) animal's needs • Develop design criteria based on research • Understand what a virtual model is and the pros and cons of traditional and CAD modelling • Place and manoeuvre 3D objects, using CAD • Change the properties of, or combine one or more 3D objects, using CADwould be useful for an animal carer including programmed featuresTo know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely • To know that a 'device' means equipment created for a certain purpose or job and that monitoring devices observe and record• To know that a sensor is a too device that is designed to a onit detect and respond to changes for a purpose	internet) for a particular		• Explain how my product	fabric		that monitoring devices observe
 Develop design criteria based on research • Understand what a virtual model is and the pros and cons of traditional and CAD modelling Place and manoeuvre 3D objects, using CAD Change the properties of, or combine one or more 3D objects, using CAD 	(user's) animal's needs		would be useful for an animal	To know that small, neat stitches		record.
based on research • Understand what a virtual model is and the pros and cons of traditional and CAD modelling • Place and manoeuvre 3D objects, using CAD • Change the properties of, or combine one or more 3D objects, using CAD	• Develop design criteria		carer including programmed	which are pulled taut are important		• To know that a sensor is a too
Understand what a virtual model is and the pros and cons of traditional and CAD modelling • Place and manoeuvre 3D objects, using CAD • Change the properties of, or combine one or more 3D objects, using CADdetect and respond to changes for a purpose of a certain purpose or job and that monitoring devices observe and record	based on research •		features	to ensure that the soft toy is strong		device that is designed to monit
model is and the pros and cons of traditional and CAD modelling• To know that a 'device' means equipment created for a certain purpose or job and that monitoring devices observe and recordrespond to changes for a purpos• Place and manoeuvre 3D objects, using CAD • Change the properties of, or combine one or more 3D objects, using CAD• To know that a 'device' means equipment created for a certain purpose or job and that monitoring devices observe and record• How that a 'device' means equipment created for a certain purpose or job and that monitoring devices observe and record	Understand what a virtual		5	and holds the stuffing securely		detect and
cons of traditional and equipment created for a certain CAD modelling purpose or job and that monitoring • Place and manoeuvre 3D devices observe and record objects, using CAD equipment created for a certain • Change the properties equipment created for a certain of, or combine one or more 3D objects, using CAD	model is and the pros and			• To know that a 'device' means		respond to changes for a purpos
CAD modelling purpose or job and that monitoring • Place and manoeuvre 3D devices observe and record objects, using CAD evices observe and record • Change the properties evices observe and record of, or combine one or more evices observe and record 3D objects, using CAD evices observe and record	cons of traditional and			equipment created for a certain		
Place and manoeuvre 3D objects, using CAD Change the properties of, or combine one or more 3D objects, using CAD	CAD modelling			purpose or job and that monitoring		
objects, using CAD • Change the properties of, or combine one or more 3D objects, using CAD	• Place and manoeuvre 3D			devices observe and record		
Change the properties of, or combine one or more 3D objects, using CAD	objects, using CAD					
of, or combine one or more 3D objects, using CAD	• Change the properties					
3D objects, using CAD	of, or combine one or more					
	3D objects, using CAD					

	Key Vocabulary								
design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock- up, prototype	fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance	design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock-up, prototype	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent	ingredients, yeast, dough, bran, flour, wholemeal, baking soda, spid herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, healthy varied, gluten, dairy, allergy, intolerance, savoury, utensils, fold, kn stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, cru	>, , rıbl				
Year 6 Skills and Knowledge									
In late KS2 pupils should also investigate and analyse:									
	 how much products cost to make 								
 how innovative products are 									
• how sustainable the materials in products are									
	 what impact products have beyond their intended purpose 								
Thro 4 9 genero 4 selec	ough a variety of creative and practical activities of operations) of designing and making. They s use research and develop design criteria to in ate, develop, model and communicate their idea select from and use a wider range of materials and select from and use a wider range t from and use a wider range of materials and select from and use a wider range t from and use a wider range of materials and select from and use a wider range select from and use select select from and use select select from and use select from and use select from and use select from and use select from and	es, pupils should be taught the kno hould work in a range of relevant form the design of innovative, fund s through discussion, annotated sk of tools and equipment to perform components, including constructio and products against their own de and how key events and individual use mechanical systems in their p cal systems in their products [for obly their understanding of computi understand and apply the e and cook a variety of predominar	wledge, understanding and skills needed contexts [for example, the home, school, ctional, appealing products that are fit f eetches, cross-sectional and exploded dia n practical tasks [for example, cutting, s n materials, textiles and ingredients, acc esign criteria and consider the views of c s in design and technology have helped products [for example, gears, pulleys, can example, series circuits incorporating sw ing to program, monitor and control the e principles of a healthy and varied diet utly savoury dishes using a range of cool	d to engage in an iterative process (one that includes a repeated cycle leisure, culture, enterprise, industry and the wider environment]. For purpose, aimed at particular individuals or groups legrams, prototypes, pattern pieces and computer-aided design haping, joining and finishing], accurately cording to their functional properties and aesthetic qualities others to improve their work shape the world ms, levers and linkages] vitches, bulbs, buzzers and motors] ir products king techniques					

Design	Make	Evaluate	Technical knowledge	Cooking and nutrition	Additional
• Design a variety of	 Measure, mark and cut wood to 	 Improve a design plan based on peer 	 To know that structures can be 	 To understand what a 	• To know that an automata is a h ind
different structures, giving	create a range of structures	evaluation	strengthened by manipulating	'footprint plan' is	powered mechanical toy
careful consideration to	 Use a range of materials to 	• Test and adapt a design to improve it	materials and shapes	 To understand that in the 	• To know that a cross-sectional
how the structures will be	reinforce and add decoration to	as it is developed	• To understand that the mechanism	real world, design , can	diagram shows the inner workings of
used, considering effective	structure	 Identify what makes a successful 	in automata uses a system of cams,	impact users in positive and	a product
and ineffective designs	 Measure, mark and cut 	structure	axles and followers	negative ways	 To understand how to use a bence
•Experiment with a range	components accurately using a	• Evaluate the work of others and receive	 To understand that different 	 To know that a prototype is 	hook and saw safely
of cams	ruler and scissors	feedback on own work	shaped cams produce different	a cheap model to test a design	 To know that a set square can b
 Understand how linkages 	 Assemble components accurately 	 Apply points of improvements 	outputs	idea	used to help mark 90° angles
change the direction of a	to make a stable frame	 Describe changes they would make 	 To know that batteries contain 	 To know that 'flavour' is how 	•To know that 'form' means the shape
force	 Understand that for the frame to 	 Identify what went well and making 	acid, which can be dangerous if they	a food or drink tastes • To	and appearance of an object •To krow
 Draw a design from 	function effectively the	suggestions for improvement	leak	know that many countries	the difference between 'form' and
three different perspectives	components must be cut	 Gathering images and information 	 To know the names of the 	have 'national dishes' which	'function
 Generate ideas through 	accurately and the joints of the	about existing products	components in a basic series circuit	are recipes associated with	•To understand that 'fit for purpose'
sketching and discussion	frame secured at right angles	 Analyse a selection of existing 	 To understand that it is important 	that country •	means that a product works how i
 Model ideas through 	 Select appropriate materials 	products	to design clothing with the client/	To know that 'processed food'	should and is easy to use
prototypes • Understand	based on the materials being	 Evaluate a recipe, considering: taste, 	target customer in mind	means food that has been put	 To know that form over purpose
the purpose of products	joined and the speed at which the	smell, texture and origin of the food	 To know that using a template (or 	through multiple changes in a	means that a product looks good b it
(toys), including what is	glue needs to dry/set	group	clothing pattern) helps to accurately	factory	does not work very well
meant by 'fit for purpose'	 Accurately cut, fold and 	 Taste testing and scoring final 	mark out a design on fabric	 To understand that it is 	 To know the importance of 'form
and 'form over function'	assemble a net	products	 To understand the importance of 	important to wash fruit and	follows function' when designing: the
• Write a recipe,	 Make and test a circuit 	 Suggest and write up points of 	consistently sized stitches	vegetables before eating to	product must be designed primaril
explaining the key steps,	incorporating a circuit into a base	improvements in productions	 To understand that the mechanism 	remove any dirt and	with the function in mind
method and ingredients	 Use a template when pinning 	 Evaluate work continually as it is 	in an automata uses a system of	insecticides• Follow a recipe,	 To understand the diagram
 Include facts and 	panels onto fabric	created	cams, axles	including using the correct	perspectives 'top view', 'side view' (nd
drawings from research	 Mark and cut fabric accurately, 	 Explain how my program fits the 	and followers.	quantities of each ingredient	 To know that designers write des gn
undertaken	in accordance with a design	design criteria and how it would be	 To understand that different 	 Adapt a recipe based on 	briefs and develop design criteria t
• Annotate designs	 Sew a strong running stitch, 	useful as part of a navigation tool	shaped cams produce different	research	enable them to fulfil a client's request
• Write a design brief from	making small, neat stitches and	• Develop an awareness of sustainable	outputs.	• Work to a given timescale	 To know that 'multifunctional'
information submitted by	following the edge	design • Identify key industries that		 Work safely and hygienically 	means an object or product has more
a client	Tie strong knots	utilise 3D CAD modelling and explain		with independence	than one function
• Develop design criteria to	Decorate a waistcoat -attaching	why		• To understand what	• To know that magnetometers ar
fulfil the client's request	objects using thread and adding a	• Describe how the product concept fits		happens to a certain food	devices that measure the Earth's
• Develop a product idea	secure fastening	the client's request and how it will		before it appears on the	magnetic field to determine which
through annotated	Learn different decorative	benefit the customers		supermarket shelf (Farm to	direction you are facing
sketches • Place and	stitches	• Explain the key functions in my		Fork)	• Evaluating the work of others an
manoeuvre 3D objects,	• Sew accurately with even	program, including any additions		• Evaluate health and safety in	receiving feedback on own work.
using CAD	regularity of stitches	• Explain how my program fits the		production to minimise cross	• Applying points of improvement ip
• Change the properties of,	• Consider materials and their	design criteria and how it would be		contamination	their toys.
or combine one or more	Junctional properties, especially	useful as part of a navigation tool		I can list the ingredients I	• Describing changes they would
3D objects, using	those that are sustainable and	• Evaluating the work of others and		need for my chosen recipe.	make/do if they were to do the project
•Experimenting with a	recyclable (for example, cork and	receiving feedback on own work.		I can read the method and	again.
range of cams, creating a	bamboo)	l	1	make a list of all of the	

design for all durbinationExplain indication croices and why they were chosen as part of a on a choice of cam to create a desiredApplying points of improvement to their toys.equipment 1 heed for my chosen recipe.on a choice of cam to create a desiredproduct concept· Describing changes they would make/do if they were to do the project againTo prepare a meal using a recipe.on vement.checking the accuracy of the jelutong and dowel piecesagainTo understand where their food comes from.inkages change therequired.required.To write up a recipe.	
tog basedwing theg were closent as part of ather togs.chosent recipe.on a choice of cam to create a desiredproduct concept· Describing changes they would make/do if they were to do the project againTo prepare a meal using a recipe.movement.checking the accuracy of the jelutong and dowel pieces required.againTo understand where their food comes from. To write up a recipe.	
of a choice of call to be product conceptDescribing changes they wouldTo prepare a meat using acreate a desired• Measuring, marking andmake/do if they were to do the projectrecipe.movement.checking the accuracy of theagainTo understand where their• Understanding howjelutong and dowel piecesfood comes from.linkages change therequired.To write up a recipe.	
create a desired recipe. movement. checking the accuracy of the jelutong and dowel pieces inkages change the required.	
• Understanding how jelutong and dowel pieces food comes from. linkages change the required. To write up a recipe.	
Inkages change the required.	
linkages change the required. To write up a recipe.	
direction of a force. • Measuring, marking and cutting	
a recipe safely and sensibly.	
the same time. ruler and scissors.	
• Understanding and • Assembling components	
drawing cross-sectional accurately to make a stable frame.	
diagrams to show the • Understanding that for the frame	
inner-workings to function effectively the	
of my design. components must be	
cut accurately and the joints of	
the frame secured at right angles.	
• Selecting appropriate materials	
based on the materials being	
joined and the speed	
at which the glue needs to dry/set	┻
Key Vocabulary	
function, innovative, seam, seam allowance, wadding, function, innovative, design frame structure, stiffen, strengthen, ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baki	n
design specification, reinforce, right side, wrong side, specification, design brief, user, purpose reinforce, triangulation, stability, soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutric	er ts,
design brief, user, purpose hem, template, pattern pieces, design brief, design specification, shape, join, temporary, permanent nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savou	rj,
design brief, design name of textiles and fastenings prototype, annotated sketch, purpose, source, seasonality utensils, combine, fold, knead, stir, pour, mix,	
specification, prototype, used, pins, needles, thread, user, innovation, research, functional, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble, nutrients	i,
annotated sketch, purpose, pinking shears, fastenings, mock-up, prototype fibre, appearance, texture, aroma, savoury dishes,	
user, innovation, research,	
functional, mock-up,	
prototype	