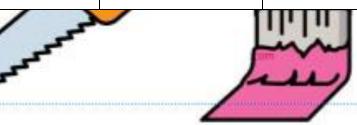


how they intend to put it together.

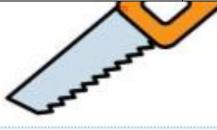


Evaluat	e • Giving a verbal	Sharing their	Making predictions about, and	 Reflecting on a 	 Tasting the soup
	evaluation of their	creations,	evaluating different materials to see if	finished product and	and giving
	own and others'	explaining the	they are waterproof. • Making	comparing to their	opinions. •
	junk models with	process they have	predictions about, and evaluating	design.	Describing some
	adult support .	used.	existing boats to see which floats best.		of the following
	 Checking to see if 		Testing their design and reflecting on		when tasting food:
	their model		what could have been done		look, feel, smell
	matches their plan.		differently. • Investigating the how the		and taste. •
	 Considering what 		shapes and structure of a boat affect		Choosing their
	they would do		the way it moves.		favourite
	differently if they				packaging design
	were to do it again.				and explaining
	 Describing their 				why.
	favourite and least				
	favourite part of				
	their model.				
Knowled	dge • To know there	Safely using and	• To know that 'waterproof' materials	 To know that a design 	 To know that
Technic	are a range to	exploring a variety	are those which do not absorb water	is a way of planning our	soup is ingredients
	different materials	of materials, tools		idea before we start.	(usually
-	that can be used to	and techniques,		To know that	vegetables and
	make a model and	experimenting with		threading is putting one	liquid) blended
	that they are all	colour, design,		material through an	together.
	slightly different.	texture, form and		object.	 To know that
	 Making simple 	function.			vegetables are
	suggestions to fix				grown.
	their junk model.				 To recognise
					and name some
					common
					vegetables.
					To know that
					different
					vegetables taste
					different.

(To know that eating vegetables is good for us. To discuss why
					different packages might be used for different foods.
	Additional		 To know that some objects float, and others sink. To know the different parts of a boat 		
	Year 1	Autumn	Spring	Summe	er
	Unit	Textiles - Puppets	Structures - Windmills	Mechanisms Wacky Races	Food and Nutrition Smoothie making
	Skills				
	Design	Using a template to create a design for a puppet	Learning the importance of a clear design criteria Including individual preferences and requirements in a design	 Designing a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move Creating clearly labelled drawings which illustrate movement 	Designing smoothie carton packaging by- hand.
	Make	 Cutting fabric neatly with scissors Using joining methods to decorate a puppet Sequencing steps for construction 	 Making stable structures from card, tape and glue Learning how to turn 2D nets into 3D structures 	Adapting mechanisms	• Chopping fruit and vegetables safely to make a smoothie.









ľ				Carrier of the	
			Following instructions to cut and		• Juicing fruits safely to make a smoothie.
			assemble the supporting structure of a windmill • Making functioning turbines and axles which are assembled into a main supporting structure • Making functioning turbines		
	Evaluate	Reflecting on a finished product, explaining likes and dislikes	Evaluating a windmill according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't. Suggest points for improvements	Testing mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move	 Tasting and evaluating different food combinations. Describing appearance, smell and taste Suggesting information to be included on packaging. Comparing their own smoothie with someone else's.
_	Knowledge	 To know that 'joining technique' means connecting two pieces of material together To know that there are various temporary methods of joining fabric by using staples. glue or pins 	To know that a client is the person I am designing for • To know that design criteria is a list of points to ensure the product meets the clients needs and wants • To know that a windmill harnesses the power of wind for a purpose like	 To know that wheels need to be round to rotate and move To understand that for a wheel to move it must be attached to a rotating axle 	

	 To understand that different techniques for joining materials can be used for different purposes To understand that a template (or fabric pattern) is used to cut out the same shape multiple times To know that drawing a design idea is useful to see how an idea will look 	grinding grain, pumping water or generating electricity • To know that windmill turbines use wind to turn and make the machines inside work • To know that a windmill is a structure with sails that are moved by the wind • To know the three main parts of a windmill are the turbine, axle and	 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 	• To know that a
		structure		blender is a machine which mixes ingredients together into a smooth liquid. To know that a fruit has seeds. To know that fruits grow on trees or vines. To know that
				vegetables can grow either above or below ground. • To know that vegetables is any edible part of a plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber).
Additional			To know some real-life items that use wheels such as	cucumber).

	 To know that materials can be manipulated to improve strength and stiffness. To know that a structure is something which has been formed or made from parts To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move. To know that a 'strong' structure is one which does not break easily. To know that a 'stiff' structure or material is one which does not bend easily 		wheelbarrows,hamster wheels and vehicles	
Year 2	Autumn	Spring	Summe	er
Unit	Textiles - Pouches	Structure - Baby Bear's Chair	Food – Baland	ced Diet
Skills				
Design	Designing a pouch	 Generating and communicating ideas using sketching and modelling. Learning about different types of structures, found in the natural world and in everyday objects. 	Designing a healthy wra combination which work v	•
Make	 Cutting fabric neatly with scissors Using joining methods to decorate a puppet Sequencing steps for construction 	 Making a structure according to design criteria. Creating joints and structures from paper/card and tape Building a strong and stiff structure by folding paper. 	 Slicing food safely using grip Constructing a wrap tha brief 	C
Evaluate	Reflecting on a finished product, explaining likes and dislikes	 Exploring the features of structures. Comparing the stability of different shapes. 	Describing the taste, tex fruit and vegetables Taste testing food comb products	



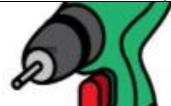






		 Testing the strength of own structures. Identifying the weakest part of a structure. Evaluating the strength, stiffness and stability of own structure. 	 Describing the information that should be included on a label Evaluating which grip was most effective
Knowledge Technical	 To know that 'joining technique' means connecting two pieces of material together To know that there are various temporary methods of joining fabric by using staples. glue or pins To understand that different techniques for joining materials can be used for different purposes To understand that a template (or fabric pattern) is used to cut out the same shape multiple times To know that drawing a design idea is useful to see how an idea will look 	 To know that shapes and structures with wide, flat bases or legs are the most stable. To understand that the shape of a structure affects its strength. 	• To know that 'diet' means the food and drink that a person or animal usually eats • To understand what makes a balanced diet • To know where to find the nutritional information on packaging • To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar • To understand that I should eat a range of different foods from each food group, and roughly how much of each food group • To know that nutrients are substances in food that all living things need to make energy, grow and develop • To know that 'ingredients' means the items in a mixture or recipe • To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy • To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'
Additional		 To know that natural structures are those found in nature. To know that man-made structures are those made by people 	









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У	ear 3	Autumn	Spring	Summer
U	Init	Food: Eating seasonally	Textiles - Cushions	Mechanisms - Pneumatic Toys
S	kills			
D	pesign	Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish	Designing and making a template from an existing cushion and applying individual design criteria.	 Designing a toy which uses a pneumatic system. Developing design criteria from a design brief. Generating ideas using thumbnail sketches and exploded diagrams. Learning that different types of drawings are used in design to explain ideas clearly.
W	Nake	 Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination Following the instructions within a recipe 	 Following design criteria to create a cushion Selecting and cutting fabrics with ease using fabric scissors. Threading needles with greater independence. Tying knots with greater independence. Sewing cross stitch to join fabric. Decorating fabric using appliqué Completing design ideas with stuffing and sewing the edges of the cusions. 	 Creating a pneumatic system to create a desired motion. Building secure housing for a pneumatic system. Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy. Selecting materials due to their functional and aesthetic characteristics. Manipulating materials to create different effects by cutting, creasing, folding and weaving.
Ε	valuate	 Establishing and using design criteria to help test and review dishes Describing the benefits of seasonal fruits and vegetables and the impact on the environment Suggesting points for improvement when making a seasonal tart 	Evaluating an end-product and thinking of other ways in which to create similar item	 Using the views of others to improve designs. Testing and modifying the outcome, suggesting improvements. Understanding the purpose of exploded diagrams through the eyes of a designer and their client.

Additional			To understand how sketches, drawings and diagrams can be used to communicate design ideas.
			ideas.To know that exploded-diagrams are used
			to show how different parts of a product fit
			together.
			To know that thumbnail sketches are small
			drawings to get ideas down on paper quickly
Year 4	Autumn	Spring	Summer
Unit	Mechanisms - Make a sling shot car	Structure - Make a viking boat	Textiles - fastenings
Skills			
Design	Designing a shape that reduces air	Designing a stable boat structure	Writing design criteria for a product,
J	resistance	that is aesthetically pleasing and	articulating decisions made
	 Drawing a net to create a structure 	selecting materials to create a desired	 Designing a personalised book sleeve
	from	effect	
	Choosing shapes that increase or	Building frame structures designed	
	decrease speed as a result of air	to support weight	
	resistance		
Make	 Personalising a design Measuring, marking, cutting and 	Creating a range of different shaped	Making and testing a paper template with
Make	assembling with increasing accuracy	frame structures	accuracy and in keeping with the design
	Making a model based on a chosen	Making a variety of free-standing	criteria
	design	frame structures of different shapes	 Measuring, marking and cutting fabric using
		and sizes	a paper template
		Selecting appropriate materials to	Selecting a stitch style to join fabric,
		build a strong structure and for the	working neatly sewing small neat stitches
		cladding	 Incorporating fastening to a design
		Reinforcing corners to strengthen a	
		structure	
		Creating a design in accordance with	
		a plan	

		Learning to create different textural effects with materials	
Evaluate	Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance	 Evaluating structures made by the class Describing what characteristics of a design and construction made it the most effective Considering effective and ineffective designs 	 Testing and evaluating an end- product against the original design criteria Deciding how many of the criteria should be met for the product to be considered successful Suggesting modifications for improvement Articulating the advantages and disadvantages of different fastening types
Knowledge	 To understand that products change and evolve over time To know that aesthetics means how an object or product looks in design and technology To know that a template is a stencil you can use to help you draw the same shape accurately To know that a birds-eye view means a view from a high angle (as if a bird in flight) To know that graphics are images which are designed to explain or advertise something To know that it is important to assess and evaluate design ideas and models against a list of design criteria 	 To know that a boat is a mode of transport To know that cladding can be applied to structures for different effects. To know that aesthetics is 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 To know that architects consider light, shadow and patterns when designing 	 To know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and Velcro To know that different fastening types are useful for different purposes To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions
Additional	 To understand that all moving things have kinetic energy To understand that kinetic energy is the energy that something (object/person) has by being in motion 	 To understand what a frame structure is To know that a 'free-standing' structure is one which can stand on its own 	

	To know that air resistance is the level			,
	of drag on an object as it is forced			
	through the air • To understand that the shape of a moving object will affect how			
	it moves due to air resistance			
Year 5	Autumn	Spring	Summer	
Unit	Mechanisms - Pop up book	Food and nutrition – What could be healthier?	Textiles - Stuffed Toy	-
Skills				
Design	Designing a pop-up book which uses a mixture of structures and mechanisms Naming each mechanism, input and output accurately Storyboarding ideas for a book	 Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute, or add additional ingredients Writing an amended method for a recipe to incorporate the relevant changes to ingredients Designing appealing packaging to reflect a recipe Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients Writing an amended method for a recipe to incorporate the relevant changes to ingredients Designing appealing packaging to reflect a recipe 	Designing a stuffed toy considering the main component shapes required and creating an appropriate template Considering the proportions of individual components	

Make	 Following a design brief to make a popup book, neatly and with focus on accuracy Making mechanisms and/or structures using sliders, pivots, and folds to produce movement Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result 	 Cutting and preparing vegetables safely Using equipment safely, including knives, hot pans and hobs Knowing how to avoid crosscontamination Following a step-by-step method carefully to make a recipe 	 Creating a 3D stuffed toy from a 2D design Measuring, marking and cutting fabric accurately and independently Creating strong and secure blanket stitches when joining fabric Threading needles independently Using applique to attach pieces of fabric decoration Sewing blanket stitch to join fabric Applying blanket stitch so the space between the stitches are even and regular
Evaluate	 Evaluating the work of others and receiving feedback on own work Suggesting points for improvement 	 Identifying the nutritional differences between different products and recipes Identifying and describing healthy benefits of food groups 	Testing and evaluating an end-product and giving point for further improvements
Knowledge	 To know that mechanisms control movement To understand that mechanisms that can be used to change one kind of motion into another To understand how to use sliders, pivots and folds to create paper-based mechanisms 	 To understand where meat comes from - learning that beef is from cattle and how beef is reared and processed, including key welfare issues To know that I can adapt a recipe to make it healthier by substituting ingredients To know that I can use a nutritional calculator to see how healthy a food option is To understand that 'cross contamination' means that bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects. 	 To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric To understand that it is easier to finish simpler designs to a high standard To know that soft toys are often made by creating appendages separately and then attaching them to the main body To know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely

Additional Year 6	 To know that a design brief is a description of what I am going to design and make To know that designers often want to hide mechanisms to make a product more aesthetically pleasing Spring	Spring	Summer
	Structure - Playgrounds	Electrical Systems -	Cooking and Nutrition Come Dine with Me
Skills		Steady Hand Game	Come Dine with Me
Design	Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs	 Designing a steady hand game - identifying and naming the components required Drawing a design from three different perspectives Generating ideas through sketching and discussion Modelling ideas through prototypes Understanding the purpose of products (toys), including what is meant by 'fit for purpose' and 'form over function' 	Writing a recipe, explaining the key steps, method and ingredients Including facts and drawings from research undertaken
Evaluate	 Improving a design plan based on peer evaluation Testing and adapting a design to improve it as it is developed Identifying what makes a successful structure 	 Testing own and others finished games, identifying what went well and making suggestions for improvement Gathering images and information about existing children's toys Analysing a selection of existing children's toys 	 Evaluating a recipe, considering: taste, smell, texture and origin of the food group Taste testing and scoring final products Suggesting and writing up points of improvements in productions Evaluating health and safety in production to minimise cross contamination





	Knowledge	To know that structures can be	To know that batteries contain acid,	To know that 'flavour' is how a food or drink	•
	Technical	strengthened by manipulating materials and shapes	which can be dangerous if they leak • To know the names of the components in a basic series circuit including a buzzer	tastes • To know that many countries have 'national dishes' which are recipes associated with that country • To know that 'processed food' means food that has been put through multiple changes in a factory • To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides • To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork)	•
	Additional	To understand what a 'footprint plan' is To understand that in the real world, design, can impact users in positive and negative ways To know that a prototype is a cheap model to test a design idea	 To know that 'form' means the shape and appearance of an object To know the difference between 'form' and 'function' To understand that 'fit for purpose' means that a product works how it should and is easy to use To know that form over purpose means that a product looks good but does not work very well To know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind To understand the diagram perspectives 'top view', 'side view' and 'back 	SHEII (FAITH TO FOIK)	
1	Hili		/ 2	ПіТіП	