




	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cooking and Nutrition 	Substantive Knowledge						
	FRUIT SALAD Focus To know that some food is grown and some is produced To know some foods that are good for us To know that we can tell what a product is from its packaging Design To know that a food product is made up of ingredients mixed together To know the purpose of a recipe To know that different ingredients give different flavours To know about the role of a chef Make To know the names of different ingredients To know the names of different tools and equipment To know the names of different cooking techniques Evaluate To know that we can make a product better next time	FRUITS AND VEGETABLES FRUIT KEBABS Focus To know that some fruit is grown in different places in the world To know that some fruit grows best in different seasons To know that we can find out about where fruit is grown from the packaging To know that we should eat 5 portions of fruit or vegetables each day To know about the role of a chef in our school Design To know that we design a product for a user To know that we can find out what a user wants by asking questions To know that fruits have different tastes Make To know the names of 5 new fruits To know the names of the tools/equipment needed To know the names of different techniques – peel, slice, chop, wash	HEALTHY WRAP Focus To know where different vegetables are grown around the world To know which vegetables grow best in which seasons To know how different food is farmed To know that we should eat 5 portions of fruit or vegetables each day To know the information that we can find from the packaging To know about key chefs in Britain Design To know that we design a product for a particular user and this design can be affected by different factors To know we can use a simple survey to find out what a user wants Make To know the names of 5 new vegetables To know the names of different techniques – peel, slice, chop, wash, grate, squeeze To know the safety rules for using knives	GREEK SALAD Focus To know all the basic food groups on the eatwell plate To know what might make a dish healthy or unhealthy To know how different foods are produced or grown (e.g. proteins, dairy, vegetables, oils) To know that there are different types of cuisine around the world To know about key chefs from around the world Design To know that we need to design a product for a user's particular needs To know that we can gather information about the wants and needs of a user by conducting surveys and questionnaires To know that taste, appearance, texture and aroma should be taken into account in a design	VARIED DIET FRUIT CRUMBLE Focus To know the nutritional benefit of different fruit To know that similar coloured fruit have similar nutritional benefit To know that the eatwell plate shows how to have a balanced diet To know how different foods are produced or grown (e.g. proteins, dairy, vegetables, oils) To know where different foods come from and when they are in season To know that some foods are imported To know about key chefs who specialise in desserts Design To know that we need to design a product for a user's particular needs To know that we can gather information about the wants and needs of a user by conducting surveys and questionnaires	CULTURE AND SEASONALITY SANDWICHES Focus To know that some people have allergies to certain ingredients To know how to make a recipe healthier To know that some foods are fair trade To know about key chefs who specialise in bread Design To know a variety of ways to collect information about a user's needs To know that recipes can be adapted to change the taste and nutritional value To know that different cultures and religions eat different types of bread To know where different ingredients come from (food miles) Make To know that we need to use different techniques for different purposes To know that we need to follow each step of a recipe	2 COURSE MEAL (PIZZA) Focus To know that many countries have 'national dishes' associated with their country To know about farm to fork To know what processed food means To know about key Italian chefs and that they cook food from different regions Design To know a variety of ways to collect information about a user's needs To know that seasoning can be used to enhance flavour (e.g. garlic/herbs) To know that some foods complement each other To know that recipes can be adapted in consultation with the user Make To know that we need to use different techniques for different purposes

		<p>To know some basic hygiene rules when preparing food</p> <p>Evaluate</p> <p>To know that we can make a product better next time</p>	<p>Evaluate</p> <p>To know that there are different ways to make a product better next time</p>	<p>To communicate a design using annotated sketches</p> <p>Make</p> <p>To know that following a recipe is necessary for success</p> <p>To know the name of different techniques – bridge/claw technique, grating, dicing, peeling, mixing, tearing)</p> <p>To know the safety rules for using and storing knives</p> <p>Evaluate</p> <p>I know that a product can be evaluated using different criteria</p> <p>To know why we evaluate a product to meet the needs of a user</p>	<p>To know that we can find recipes in books and on the internet</p> <p>Make</p> <p>To know that each step of a recipe must be followed carefully</p> <p>To know all the different ingredients</p> <p>To know that our product will go wrong if we use the wrong techniques</p> <p>I know the name of different techniques – bridge/claw technique, baking, mixing, rubbing in, seasoning</p> <p>To know it is important to use oven gloves</p> <p>Evaluate</p> <p>I know that a product can be evaluated using different criteria</p> <p>To know why we evaluate a product to meet the needs of a user</p>	<p>To know that cross contamination must be avoided</p> <p>Evaluate</p> <p>To know that a product needs to be evaluated based on the user's specific wants and needs</p>	<p>To know that there are different hygiene rules for different foods</p> <p>Evaluate</p> <p>To know that a product needs to be evaluated based on the user's specific wants and needs</p>
Disciplinary Knowledge							
<p>Focus</p> <p>To give an opinion about likes and dislikes</p> <p>To discuss why different packaging is used</p> <p>To describe the look, feel, smell and taste of a product</p> <p>To describe why an ingredient is healthy</p> <p>Design</p> <p>To be able to design a recipe</p>	<p>Focus</p> <p>To give an opinion about a fruit based on the look, feel, taste and smell of a fruit</p> <p>To describe the taste of a fruit</p> <p>To explore which fruits taste good together</p> <p>Design</p> <p>To generate different ideas for a product and</p>	<p>Focus</p> <p>To give an opinion about a variety of foods based on the look, feel, taste and smell</p> <p>To describe a variety of foods using the senses</p> <p>To explore which foods taste good together</p> <p>To explore using different quantities of ingredients</p>	<p>Focus</p> <p>To describe a variety of healthy, balanced meals</p> <p>To describe how cuisines are different around the world</p> <p>To compare and contrast different ingredients</p> <p>Design</p>	<p>Focus</p> <p>To describe which food groups the ingredients of a crumble fit into</p> <p>To describe how a crumble can be part of a balanced diet</p> <p>To give an opinion about different fruits</p> <p>Design</p> <p>To research fruits and crumble recipes</p>	<p>Focus</p> <p>To describe where bread fits into the eatwell plate</p> <p>To describe how bread can be part of a balanced diet</p> <p>To give an opinion about different breads and ingredients using a sensory web</p> <p>Design</p>	<p>Focus</p> <p>To use the eatwell plate to describe a balanced diet</p> <p>To give an opinion about whether meals are healthy or not</p> <p>To describe the nutritional value of different cuisines around the world</p> <p>Design</p>	

	<p>To independently choose an ingredient for flavour To design decoration and packaging based on the user Make To use basic tools to mix and cut To experiment with different decoration To follow a recipe carefully Evaluate To reflect on a finished product, comparing it to their design</p>	<p>choose the best one for their purpose To identify places where fruits grow To describe where fruit is on the eatwell plate To ask questions to check their user is happy with the product To communicate their ideas through drawing and labelling Make To use appropriate tools and techniques to peel, slice, chop and wash To select the fruits they want to create their product To prepare and present a fruit kebab safely Evaluate To evaluate their product against the design, considering the user To explain likes and dislikes relating to a design or product To describe what worked well and what could be better</p>	<p>Design To generate different ideas for a product and explain why they have chosen their final design To describe where their ingredients fit on the eatwell plate To find out about the wants and needs of their user To communicate their ideas through drawing and writing Make To use appropriate tools and techniques to peel, slice, chop and wash To select the right amount of ingredients to create their product To know how to prepare their product safely and hygienically Evaluate To evaluate their product against the design, considering the specific needs of the user To explain to a peer what they like and why</p>	<p>To research the ingredients of salads using given resources To create a healthy and nutritious salad using appropriate ingredients from a particular cuisine Make To follow food safety guidelines to prepare their workspace and make their dish To independently follow instructions in a recipe Evaluate To identify the strengths and areas for development in their product To establish criteria to evaluate their product To consider the views of their intended users To record evaluations using a simple table</p>	<p>To create a recipe for a fruit crumble using seasonal ingredients To adapt a recipe to meet the needs of a user To use given methods to research ingredients Make To follow a baking recipe from start to finish To begin to measure out quantities of ingredients To prepare and bake safely, describing the guidelines they are following Evaluate To identify the strengths and areas for development in each part of the process To establish criteria to evaluate their product To suggest alternative ways to make or improve their product To record evaluations in a simple graph</p>	<p>To design a sandwich with ingredients that complement each other To use a variety of methods to research ingredients To communicate ideas using text and annotated sketches To compare nutritional value of different ingredients Make To plan a recipe, listing appropriate ingredients and equipment To use a range of preparation and baking techniques (knead, beat, rub, mix, slice, chop) To measure some ingredients accurately Evaluate To record evaluations using a sensory analysis</p>	<p>To design a menu with food that complements each other To independently use a variety of methods to research Italian cuisine To communicate ideas using digital resources To compare nutritional values and make a healthy choice Make To write a step-by-step recipe, detailing quantities of ingredients and equipment To measure ingredients accurately To use a range of preparation and baking techniques (knead, beat, rub, mix, dice, grate, slice) To know why we wash fruit and vegetables To present food to look appealing to the user Evaluate To record evaluations using a range of tools that have been independently chosen</p>
<p>Key Chefs</p>		<p>School kitchen staff</p>	<p>Michael Caines James Martin</p>	<p>Lefferis Lazarou Michel Roux</p>	<p>Mary Berry Delia Smith Amaury Guichon</p>	<p>Paul Hollywood Nishitha Kannan Anna Higham</p>	<p>Giada De Laurentiis Antonio Carluccio</p>

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Structures						
	Substantive Knowledge						
	<p>JUNK MODELLING</p> <p>Focus To know models can be constructed on different scales To know models can have a particular purpose</p> <p>Design To know that a design is a way of planning our ideas before we start</p> <p>To name some tools and materials they might use</p> <p>Make To know that different materials have different properties To know the meaning of the terms 'float' and 'waterproof'</p> <p>Evaluate To know that we can make a product better next time</p>	<p>FREE STANDING STRUCTURES</p> <p>Focus To know a structure is something that has been made and put together To know that models can serve practical and aesthetic purposes To know that different parts of a product have different purposes To know that different structures are used for different purposes</p> <p>Design To know the shape of a structure affects its strength To know that a stable structure is one which is unlikely to change or move To know that a strong structure does not break easily To know that a stiff structure does not bend easily</p> <p>Make To know materials can be manipulated to improve strength and stiffness To know the names of different materials, tools and techniques To know that structures with flat bases are the most stable</p> <p>Evaluate To know that it is important to evaluate a product</p>	<p>SHELL STRUCTURES</p> <p>Focus To know what a shell structure is To know the properties of a shell structure To know that we can disassemble a product to see how it is constructed To know that shell structures are used for different purposes To know about key designers and craftspeople</p> <p>Design To name 2D and 3D shapes To know that design specification is a list of success criteria for a product</p> <p>Make To know that a 2D net becomes a 3D shape when assembled To know that CAD can be printed using a 3D printer To know that measurements must be exact To know the names of different materials, tools and equipment</p> <p>Evaluate To know why we need to evaluate a product against the original design</p>	<p>WOODEN FRAME STRUCTURES</p> <p>Focus To know what a frame structure is To know that it is important to follow a user's design brief To know that designers work in a variety of contexts and generate ideas from a number of different sources To know about key designers and craftspeople</p> <p>Design To know that the construction of a structure will affect its strength and stability To know that a design specification must meet the needs of the user and be followed exactly</p> <p>Make To know that there are different ways to join wood together To know that there are different ways to strengthen a structure To know the names of different materials, tools and techniques</p> <p>Evaluate To know why it is important for a finished design to match the design brief</p>			
Disciplinary Knowledge							
<p>Focus To explore pictures and models as a basis of their own design</p> <p>Design To use knowledge from exploration to inform design</p>	<p>Focus To research different structures To work with imaginary and real life contexts (e.g. school) To say what they like or don't like about a structure</p> <p>Design</p>	<p>Focus To describe the features of a product in terms of its user and purpose To explain the design of a product and how a product works To describe the strengths and weaknesses of a product</p> <p>Design</p>	<p>Focus To describe how the product will meet the needs of its user and detail any problems that might occur To explain why products are appealing to the user and how they will be used</p> <p>Design</p>				

	<p>To generate an idea based on a simple design To suggest ways to make a product waterproof <u>Make</u> To select appropriate tools and materials to build an object To improve fine motor skills when cutting To join different materials together To explore how to make a product float <u>Evaluate</u> To discuss a finished structure and think about changes To describe favourite and least favourite parts of their product</p>	<p>To generate an idea based on looking at existing designs To include individual preferences in a design To develop and model ideas through drawing and labelling <u>Make</u> To use a variety of tools to construct a structure (scissors, glue, tape) To use a variety of construction techniques (folding, layering, rolling, stacking) to create joints and structures To select new and reclaimed materials (boxes, tubes, straws, newspaper) to build structures To follow instructions to construct objects To join two structures or parts of a structure together To use simple finishing techniques <u>Evaluate</u> To talk about the positives and negatives of the finished product To test whether the structure is strong and identifying the weakest part To compare the stability of different structures and explain why To list changes that could make it better</p>	<p>To research the components of shell structures by taking one apart To generate multiple ideas from a design criteria to make a design specification To develop ideas through annotated sketches To use CAD software to design a shell structure <u>Make</u> To make 3D geometric shapes To assemble nets and select an appropriate join To measure, mark, score, shape and assemble nets To stiffen and strengthen a structure using laminating, corrugating and ribbing To work together to 3D print a shell structure To create a personalised design <u>Evaluate</u> To test and evaluate own product against design criteria To suggest modifications to the design and the finished product, and the reasons for them To evaluate the work of a peer based on the aesthetic of the finished product and in comparison to the original design</p>	<p>To generate multiple ideas from a design criteria and explain final choices To make a detailed design specification To design a structure that can support weight To communicate ideas through cross section and exploding diagrams To develop ideas through prototypes <u>Make</u> To measure, mark and cut wood using appropriate tools (saw, clamp, vice) To reinforce using techniques to add strength (triangulation, elastic bands) Use tools to join construction materials (glue gun, tape) To use tools safely To explain why materials have been selected <u>Evaluate</u> To critically evaluate the product against a design specification, intended user and purpose To suggest modifications and make them based on testing of the product To peer review product based on design, strength, stability, quality of finish and aesthetics</p>
<p>Key designers/ architects</p>		<p>Zarah Hadid Frank Lloyd Wright</p>	<p>Tiffany Toblerone</p>	<p>William Patterson/John Baker Christopher Wren</p>

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Textiles 	Substantive Knowledge						
	<p>Focus To know that we can make products that are useful</p> <p>Design To know that a design is a way of planning our ideas before we start</p> <p>To name some tools and materials</p> <p>Make To know that threading is putting one material through another</p> <p>To know that materials feel different depending on properties</p> <p>Evaluate To know that we can make a product better next time</p>	<p>Focus To know it is useful to identify the strengths and areas for development in each part of the process To know we need to consider the views of their intended users</p> <p>Design To know the name of different materials that I will use To know the name of different tools that I will use To know the name of different techniques that I will use To know that I need to draw my design to help make my final product</p> <p>Make To know that joining is connecting two pieces of fabric To know that fabric can be joined using staples, glue or pins To know that different joining techniques are used for different purposes To know a pattern can be used to cut out a shape To know that sewing is a method of joining fabric To know that tying a knot is important in sewing To know the name of the running stitch To know that two fabric shapes can make a 3D product</p> <p>Evaluate To know why it is important to evaluate a product</p>	<p>Focus To know that we can disassemble products to see how they fit their purpose To know that designers work in a variety of contexts such as home, school and leisure To know about key textile designers and craftspeople</p> <p>Design To know that we can gather information about the wants and needs of a user by conducting surveys and questionnaires To know what a pattern is To know that creating a prototype can be useful to check design or proportions To know that ideas can be collected from a range of sources To know that designs can be different depending on the user and the purpose To know that a design must be planned out to be successful</p> <p>Make To know that when two edges of fabric have been joined together it is called a seam To know that it is important to leave space on the fabric for the seam. To know the names of different stitches – back, over sew and running To know that some products are turned inside out after sewing so the stitching is hidden. 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 embellishment can be used to personalise and decorate a product</p> <p>Evaluate To know why we evaluate a product against an original design</p>	<p>Focus To know that it is important to follow a user's design brief To know that designers work in a variety of contexts and generate ideas from a number of different sources To know about key textile designers and craftspeople</p> <p>Design To know that we can carry out research using surveys, interviews, questionnaires and web-based resources To know that patterns and prototypes should be created to scale to help accurately mark out a design To know that designers should collect ideas from a variety of different sources, including the internet To know the properties of different materials and whether these are functional or aesthetic</p> <p>Make To know a variety of different stitches and why they would be used (back, running, oversew, blanket) To know different fastenings and why they would be used To know that small, neat stitches are important to ensure the product holds the stuffing securely To know that neat stitching is important when stitching is on the outside of a product To know a variety of techniques and why these are important (e.g. not sewing close to the edge, turning products inside out, choosing the correct stitch for the purpose) To know that embellishment can be used to personalise a product to a user's brief</p> <p>Evaluate To know why it is important for a finished design to match the design brief</p>			

Disciplinary Knowledge

Focus

To describe different products

Design

To design a simple pattern on paper
To discuss what makes a good design
To explore and choose tools and materials

Make

To develop fine motor skills cutting with scissors
To develop fine motor skills threading and weaving

Evaluate

To reflect on a finished product, comparing it to their design

Focus

To work with imaginary and real life contexts (e.g. school)

To be able to say who a product is for and how they will use it

To describe how a product works

To say why a product will be suitable for a user

To say what they like or don't like about a product

Design

I can select colours, materials and decorative material to put on my product

I can generate ideas based on my own experience

I can decide who my product is for

I can give simple ways that my product is suitable for my user

I can complete a simple annotated sketch

Make

To know how to thread a needle

To be able to sew running stitch neatly to join fabric

To draw and cut out a pattern

To cut fabric neatly with scissors

I can stick decorative items onto my puppet

I can sequence the steps for construction

Evaluate

To explain likes and dislikes relating to a design or product

To describe what worked well and what could be better

To explain to a peer what they like and why

To demonstrate that their product works and how to use it

Focus

To describe the features of a product in terms of its user and purpose

To explain how a product works

Design

To design a pattern using 2D shapes

To make annotated sketches to communicate ideas

To make design decisions based on resources available

To use the work of famous designers to inspire their own work

Make

To select appropriate tools and materials according to function or aesthetics, explaining their choices

To apply measuring, marking, cutting and joining skills with some accuracy

To select appropriate stitches and apply them accurately

To select and incorporate a fastening

To apply a range of finishing techniques, using art and design skills

Evaluate

To identify the strengths and areas for development in each part of the process

To consider the views of their intended users

To suggest alternative ways to make or improve their product

Focus

To describe how the product will meet the needs of its user and detail any problems that might occur

To explain why products are appealing to the user

Design

To survey users and take their views into account

To create a 2D pattern to scale

To consider the proportions of individual components

To communicate their designs using cross sections or exploding diagrams

To make design decisions based on budget

Make

To measure, mark cut and join fabric accurately, using pins where necessary to secure fabric

To sew a variety of stitches strongly and neatly to suit the purpose

To thread needles and tie secure knots independently

To use decorative stitching, appliqué and finishing materials to personalise a product


To finish a product with one of more fastenings

Evaluate

To reflect on a product throughout the design process, making amendments as necessary


To test an end product for safety and sturdiness

To evaluate an end product aesthetically

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mechanisms 	Substantive Knowledge						
		MOVING STORYBOOK Focus To know what a design is (a plan) To know some real-life items that use mechanisms Design To know a mechanism is the part of an object that moves together To know that there are different components to a mechanism Make To know that a slider mechanism has a slider, slots, guides and an object To know that bridges and guides are pieces of card that purposefully restrict the movement of the slider Evaluate To know that we can make a product better next time	MOVING CAR Focus To know that a design can be followed to achieve a purpose To know that mechanisms serve a practical purpose To know that different mechanisms have different purposes To know real-life items that use wheel mechanisms Design To know that wheels need to be round to rotate and move To know that for a wheel to move it must be attached to a rotating axle To know that an axle moves within an axle holder Make To know the names of different materials To know the names of different components of a vehicle To know that the frame of a vehicle has to be balanced Evaluate To know that there are different ways to make a product better next time	POP-UP CARD Focus To know that mechanisms are a collection of moving parts that work together as a machine to produce movement To know some real life objects that contain mechanisms Design To know there is always an input an output in a mechanism To know that a lever is something that turns on a pivot To know that a linkage mechanism is made up of a series of levers To know that mechanisms can be made using different components (e.g. split pins, paper clips) Make To know that sketches, drawings and descriptions must be followed to fulfil a design brief To know that there is an order to making a mechanism To know the meaning of the terms lever, linkage, pivot and system To know that levers can be made of different materials Evaluate To know why we evaluate a product against an original design	FAIRGROUND RIDE Focus To know that a mechanism uses a series of cams, axles and followers To know some real-life objects that contain pulleys and gears To know how a fairground ride toy is powered Design To know that a cross-section diagram shows the inner workings of a product To know that different shaped cams produce different outputs Make I know the meaning of the terms pulley, gear, drive belt, driver, follower, cam, mesh and motor spindle To know that for the frame to function effectively the components must be cut accurately To know that the joints of the frame must be secured at right angles I know the safety rules for using tools and equipment Evaluate To know why it is important for a finished design to match the design brief		

Disciplinary Knowledge				
	<p>Focus To investigate how to use and adapt mechanisms To explore moving storybooks</p> <p>Design To design a moving storybook for a given audience To develop and model ideas through drawing, using arrows and labels</p> <p>Make To follow a design to create a model using levers and sliders To make levers and sliders, following instructions To use scissors, hole punch and paper fasteners To use simple finishing techniques</p> <p>Evaluate To test a finished product to see if it moves as planned and how it could be fixed To test a product with its intended audience</p>	<p>Focus To investigate how wheels and axles work To explore how wheels are constructed in different products</p> <p>Design To design a vehicle that includes wheels, axles and axle holders To design a vehicle where the wheels move To create a clearly labelled drawing to illustrate movement, using arrows</p> <p>Make To make a mechanism that allows the wheels to move To adapt a mechanism if it doesn't work To adapt a mechanism to fit their vehicle design To use appropriate tools to cut, join and allow movement To use materials for specific purposes To use simple finishing techniques</p> <p>Evaluate To test wheel and axle mechanisms to see if they work</p>	<p>Focus To investigate how levers and linkages work in different products To disassemble a mechanism to see how it works To describe how a product works</p> <p>Design To create two simple ideas from the design criteria To develop ideas through annotated sketches and models To ask questions to develop understanding</p> <p>Make To make prototypes to test out different levers and linkages To use appropriate tools to cut, shape and join materials To use more detailed finishing techniques</p> <p>Evaluate To test and critically evaluate product against design criteria and commercially made products To suggest points for modification To use peer feedback to modify a final design</p>	<p>Focus To describe how the product will meet the needs of its user and detail any problems that might occur To explain why products are appealing to the user</p> <p>Design To create two ideas from the design criteria based on the desired movement To develop and model ideas through cross section and exploded diagrams from different perspectives, and prototypes To prioritise and consider function and aesthetics To use a construction kit to investigate pulleys, gears and speed of rotation</p> <p>Make To measure using a ruler and set square, mark and cut components using appropriate tools (bench hook and saw) To assemble components to make a stable frame by selecting appropriate materials based on properties To cut components accurately for a mechanism to function</p> <p>Evaluate To critically evaluate the product against the design specification, intended user and purpose To suggest improvements and points of modification To evaluate the potential of the project using a user web</p>

			To talk about the positives and negatives of the mechanism		
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electrical components 	Substantive Knowledge						
					TORCHES	STEADY HAND GAME	
					<p>Focus To know the common features of an electrical product To list examples of common electrical products To know that we can disassemble a product to see how it works</p> <p>Design To know the importance and purpose of information design To know what electrical conductors and insulators are To know that a battery contains stored electricity that is used to power products To know that choice of material can affect a product To know the features of a torch</p> <p>Make To know the name and appearance of a bulb, battery, battery holder and crocodile wire To know that an electrical system is a group of parts that work together to transport electricity around a circuit To know that there must be a complete circuit for a bulb to light up</p> <p>Evaluate To know why we evaluate a product against an original design</p>	<p>Focus To know that product analysis is critiquing the strengths and weaknesses To know that configuration means how the parts are arranged</p> <p>Design To know that form means the shape and appearance of an object To know the difference between form and function To know that fit for purpose means that a product works how it should To know that form over purpose means that a product looks good but 'doesn't work well' To know that function is the most important part of the design</p> <p>Make To know the names of the components in a series circuit, including a buzzer To know that series circuits only have one direction for the electricity to flow To know that all components turn off when there is a break in a series circuit To know that batteries contain acid, which can be dangerous</p> <p>Evaluate To know why it is important for a finished design to match the design brief</p>	

Disciplinary Knowledge					
				<p>Focus To research different electrical products To describe how an electrical product works</p> <p>Design To generate two different ideas from the design criteria based on research To develop ideas through annotated sketches To plan out what a product will be like using annotated sketches To create design and function success criteria</p> <p>Make To measure, mark, cut and accurately assemble materials to produce a 3D structure To make a push and turn switch using classroom materials To securely connect electrical components to create a complete circuit To use finishing techniques to complete a light structure</p> <p>Evaluate To test and evaluate own product against design and function criteria To evaluate the electrical component To suggest points for modification</p>	<p>Focus To research different electrical products and identify the strengths and weaknesses To describe in detail how an electrical product using a series circuit works To analyse existing games</p> <p>Design To generate two ideas from the design criteria To develop ideas through prototypes, cross section and exploded diagrams – to draw design from different perspectives To create a prototype</p> <p>Make To measure, mark, cut and accurately assemble materials using appropriate tools To construct a stable base To make and test a circuit To incorporate a circuit into a base To use finishing techniques to achieve a high quality finish</p> <p>Evaluate To critically evaluate the product against a design specification, intended user and purpose To suggest modifications and make them based on testing of the product To peer review product based on design, strength, stability, quality of finish and aesthetics</p>
Key electrical pioneers				Alessandro Volta Nikola Tesla	Thomas Edison Lewis Latimer