Design and Technology – Progression Document

Structures

Year	Evaluate and Experiment:	Consider and Design:	Make:	Self-evaluate:
R	• Develop strategies for staying calm when frustrated. • Discuss how to fix problems. • Use pattern blocks and tangrams. • Use magnetic construction materials. • Copy 2D and 3D patterns. • Experiment with those patterns e.g. tessellations. • Make patterns following rules e.g. ABBABB, ABBCABBC. • Play with shape e.g. two triangles can make a square. • Explore different ways to make e.g. hexagons. • Find 2D and 3D shapes in different environments. • Continue and copy repeating patterns. • Experiment with joining a range of materials in a variety of ways - split pins, treasury tags, slits and slots, different tapes • Interact with tradespeople.	• Set own goals and discuss the achievement of meeting them. • Make simple drawings of what they would like to make.	• Use scissors to cut straight and curved edges. • Use a range of joining techniques and materials – paper fasteners, paperclips, tape, treasury tags, bulldog clips… • Use sandpaper on wood. • Hammer a nail in wood with supervision. • Discuss safety/tool techniques e.g. wear goggles/gloves. • Show resilience and perseverance. • Hold tools/equipment safely and appropriately. • Observe closely and replicate parts/whole structures. • Model/experiment with playdough/clay. • Use construction kits to build basic structures. • Use 'junk' to create own models. • Begin to create designs showing some basic techniques e.g. hinge. • Use artistic effects accurately e.g. paint windows on a model building. • Explain choices for shapes.	•Talk about things that they have built being encouraged to say what they like/ what works well.
1	• Investigate and evaluate chairs around school - develop criteria (comfort, stability...) and carry out simple tests, on wheels, stackable... • Research/investigate a range of chairs throughout the world - thrones, waiting areas, disabilities, recliners, historical styles. What materials have been used? Why? • Explore the joints used in a variety of chairs (glue, staples, screws, welding). • Provide short practical tasks to allow children to explore joining reclaimed materials (glue, tape, cut slots). • Allow children to explore strengthening	• Create an agreed set of success criteria to be evaluated against at the end e.g. strength test, stability test... • Encourage the children to develop their ideas through talking, drawing and making mock-ups of their ideas with construction kits and other materials. • Children make designs for their chair considering the needs of each of the three bears when designing - baby bear is small so lower seat or steps to get up. daddy bear's side need extra strength/buttresses? • Put simple annotations on and present ideas to an audience.	• Use appropriate tools and materials to construct their design. • Use simple measuring and drawing to make their design. • Use some appropriate joining techniques. • Use some appropriate strengthening techniques. • Show resilience. • Be prepared to make changes to original design and explain why.	• Children evaluate their final product against the original design criteria created. • Give successes and areas for improvement. • Talk about the stages of the making process and the journey that they made.

	and stabilising structures. (How stop a building block from toppling over? Explore images of the Eiffel tower and observe its wide base. - Link to PE standing with legs apart and together • Encourage measuring, marking out, cutting with scissors, shaping, joining and finishing with a range of appropriate tools. • Discuss what they have learnt and consider the suitability of materials for their chair according to their characteristics. • Allow children to build and explore a variety of freestanding structures using construction kits, such as wooden blocks, interconnecting plastic bricks and those that make frameworks e.g. How can they stop their structures from falling over? How they can be made stronger and stiffer in order to carry a load? • Children fold paper or card in different ways to make freestanding structures, using masking tape where necessary to make joins. Encourage them to think about how folding materials can make them stronger, stiffer, stand up and be more stable e.g. Can they support an object on top of their structure without it falling over or breaking?			
3	• Know what a shell structure is and its purpose e.g. protecting, containing, presenting... •Explore different shell structure packages identifying the shape, how content is held securely. • Explain possible choices made by a shell packaging designer. • Unfold/disassemble to see how they have been created. • Explore how flaps/interlocking slits are used as joining techniques. • Play about with construction materials to	• Create an agreed set of success criteria to be evaluated against at the end e.g. strength test, shock test, ease of carrying test. • Encourage the children to develop their ideas through talking, drawing and making mock-ups of their ideas with construction kits and other materials. • Children make designs for their container considering the needs. • Design a shell structure product to hold an artefact for a museum piece that will allow it to be transported.	• Use appropriate tools and materials to construct their design. • Use flaps/interlocking slits as ways of securing joints. • Use accurate measuring and drawing to make their design. • Use appropriate joining techniques. • Use appropriate strengthening techniques. • Show resilience. • Be prepared to make changes to original design and explain why.	•Evaluate their ideas and products against design the criteria. •Explain the purpose of their design. •Evaluate their product to make it and make changes if needed. •Evaluate their shell structure.

	explore how nets fold to create 3D shapes. • Use nets to create simple 3D shapes. • Experiment by drawing nets and seeing how they fold to create 3D shapes. Consider their appeal and what purpose they will be fit for. • Discuss and experiment with ways to make materials/products stronger - overlapping, rolling, triangles, extra pieces/supports. • Begin to measure and join materials accurately using a standard measure. • Explore ways that fragile items are protected when being transported e.g. bubble wrap, polystyrene, suspended. • Discuss eco-friendly options/recycling in terms of materials used in packaging.			
4	• Safely disassemble battery operated items identify components and how they are secured within. • Consider materials used and their properties. • Investigate a range of switches used in everyday items as well as others. • Experiment with ways of making own switches e.g. tinfoil on folded card, paperclip tilt switch... • Explore ways of making secure connections. • Know about the dangers of electricity. • Learn ways to prevent short circuits. • Build on Year 3 knowledge about shell product purposes. • Explore making more complicated 3D shell shapes from nets.	• Create own set of success criteria based on battery operated product that they will make considering purpose and audience. • Create annotated diagrams and exploded diagrams and discuss intentions. • Create a plan of action for their building process. • Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.	• Follow their own plan of action for the making process. • Select from and use appropriate tools and equipment to cut, shape, join and finish with some accuracy. • Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities.	• Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.
6	• Investigate and disassemble frame products considering how the shell and frame work together e.g. tents, umbrellas, bus/tram shelter. • Experiment with making a variety of frames using e.g. kebab skewers and sticky tack.	• Create design sketches from several different angles e.g. plan view. • Create an accurate prototype of their design using e.g. card and kebab sticks. • Consider the final appearance of their product for their user e.g. camouflage.	• Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join appropriate construction materials to make frameworks and their shells. Use finishing and decorative techniques suitable for the product being made.	• Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.

	• Explore how to create a shell that accurately fits a made frame. • Explore how to keep a shell securely attached to a frame. • Explore how structures are strengthened. • Identify and investigate temporary joins such as Velcro, buttons, zips • Understand how to strengthen, stiffen and reinforce 3D frameworks. • Research requirements for a user of a portable bird hide. Research camouflage.	• Consider constraints e.g. time and costings. • Formulate a clear plan, including a step-by-step list of what needs to be done and a list of resources to be used.		
	Mechanisms			
	Evaluate and Experiment:	**Consider and Design:**	**Make:**	**Self-evaluate:**
R	• Early experiences of working with paper and card to make simple flaps and hinges. • Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape. • Identify and explore real world mechanisms.	• Make simple mechanisms for their own use as part of role play. •Make simple drawings of what they hope to achieve/create.	• Explore and recreate simple hinges, wheels and axles for own purposes. • Use simple mechanism kits e.g. gears. • Use tools to make moving parts e.g. split pins and hole punch. • Use widening vocabulary in the correct context. • Show resilience and perseverance. • Learn how everyday objects work by dismantling things. • Discuss safety including electricity/ using tools.	•Talk about things that they have created being encouraged to say what they like/ what works well/ describe the movement/talk through the mechanism.
1	• Play with and explore pop-up books that use a range of sliders and levers. • Explore some that have been dissected. • Play with split pins, fastening strips of card together and seeing how they can move (levers). • Identify, observe and explore some real-world levers - seesaw, door handle, corkscrew, puppets...	• Begin to understand that different mechanisms produce different types of movement. • Choose own style of lever and slider to use to create a moving element for a Christmas card. • Explain choice of lever. • Create simple design and explain the working element. • Create a simple paper mock-up to test design. • Suggest ways in which to start and discuss a plan of action to make. • Work together to create a set of success criteria.	• Select and use tools suitable for the task, explaining their choices to cut, shape and join paper and card. Use tools safely and accurately carrying out simple standard and non-standard measuring as required. • Use simple finishing techniques suitable for the product they are creating.	• Children evaluate their final product against the original design criteria created. • Give successes and areas for improvement. • Talk about the stages of the making process and the journey that they made.

2	• Play with a range of toy vehicles such as diggers, trucks etc with moving parts. • Explore vehicles in the real world with wheels - bicycles, playground toys, trolleys... • Explore and use wheels, axles and axle holders. • Explore vehicles with moving parts - cranes, tipper trucks, skip trucks, bin wagons, forklift trucks. • Use construction toys to create vehicles. • Discuss how they work. • Take some apart to explore the workings. • Identify similarities and differences. • Distinguish between fixed and freely moving axles.	• Generate ideas and designs for own wheeled vehicle with a moving element and talk through ideas using their own experiences. • Think about the purpose of their vehicle and use techniques to construct their design using moving parts, levers, sliders, hinges. • Develop, model and communicate their ideas through drawings and mock-ups with card and paper. • Suggest where to start and what to do next • Work together to create a set of success criteria.	• Select from and use a range of suitable tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing. • Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics. • Explain their choices to cut, shape and join paper and card. • Use accurate finishing techniques suitable for the product they are creating.	• Children evaluate their final product against the original design criteria created. • Give successes and areas for improvement. • Talk about the stages of the making process and the journey that they made.
4	• Play with pneumatics and syringes e.g. with water, to blow up balloons. Link two together. Understand how they work. • Explore different uses of pneumatics in the real world. • Investigate and analyse books, videos and products with pneumatic mechanisms.	• Explore ways in which animals move - mouths, legs, beaks, tails… • Create a realistic design that meets a design brief for a mechanical animal using a pneumatic mechanism. Focus on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas. • Develop, model and communicate their ideas through drawings and mock-ups with card and paper. • Create a set of instructions for self to follow to create their model.	• Order the main stages of making. • Select from and use appropriate tools to cut and join materials and components such as tubing, syringes and balloons. • Select from and use finishing techniques suitable for the product they are creating. • Work towards the specific set of design criteria given. • Use quality joins that will withstand testing. • Create a product with a professional finish.	• Evaluate their final product against the original design criteria created and user needs. • Give successes and areas for improvement. • Talk about the stages of the making process and the journey that they made. • Evaluate the products of others.
5	• Play with toys that use pulley, gears and cams. • Play with different set ups of pulleys, gears and cams using construction toys. • Research how pulleys, gears and cams are used in the real world. • Explore different uses of pulleys, gears and cams in the real world knowing the particular strength/advantage of each.	• Generate ideas and designs for own toy with a moving mechanical element explaining why they have chosen that particular mechanism. • Develop, model and communicate their ideas through accurate three-dimensional drawings. • Create a detailed set of instructions for self to follow to create their model. • Work towards the specific set of design criteria given.	• Use woodworking tools - saw and timber safely. • Select and use appropriate tools and materials to create their model. • Use accurate standard measurements. • Use quality joins and mechanisms that will withstand testing. • Consider aesthetics to create a product with a professional finish.	• Children evaluate their final product against the original design criteria created. • Give successes and areas for improvement. • Talk about the stages of the making process and the journey that they made.

	Textiles			
	Evaluate and Experiment:	**Consider and Design:**	**Make:**	**Self-evaluate:**
2	• Play with an investigate a range of puppets including glove puppets. • Identify and discuss materials used and range of movement. • Explore how details have been added to those puppets. • Play with creating realistic movements including using their voice to give the puppets life. • Draw round and cut out a variety of things. • Use a template to create a duplicate. • Learn how to do a simple running stitch.	• Use pictures and words to convey what they want to design/make. • Propose more than one idea for their product. Use kits/reclaimed materials to develop more than one idea. • Model ideas with kits, reclaimed materials. • Select appropriate technique explaining: First… Next… Last…. • Explore ideas by rearranging materials. • Select pictures to help develop ideas. • Use drawings to record ideas as they are developed. • Add notes to drawings to help explanations. • Describe their models and drawings of ideas and intentions.	• Discuss their work as it progresses. • Select materials from a limited range that will meet the design criteria. • Select and name the tools needed to work the materials. • Explain what they are making. • Explain which materials they are using and why. • Name the tools they are using. • Describe what they need to do next. Cut out shapes which have been created by drawing round a template onto the fabric. • Join fabrics by using e.g. running stitch, glue, staples, over sewing, tape. • Decorate fabrics with attached items e.g. buttons, beads, sequins, braids, ribbons. • Colour fabrics using a range of techniques e.g. fabric paints, printing, painting.	• Explore existing products and investigate how they have been made. • Decide how existing products do/do not achieve their purpose. • Talk about their design as they develop and identify good and bad points. • Note changes made during the making process as annotation to plans/drawings. • Say what they like and do not like about items they have made and attempt to say why. • Discuss how closely their finished product meets their design criteria and how well it meets the needs of the user.
3	• Explore a range of fabric containers including stitches/joins. If possible, turn inside out to see how they are sewn together – this could be done with a jumper. • Develop running stitch and overstitch/blanket stitch techniques.	• Consider the content of their project including size/need for no gaps if something like coins, will there be a handle/strap? • Consider aesthetics for the user such as favourite colour/interests for added decoration. • High ability might consider ways of keeping their product closed e.g. adding a button. • Create a shared success criteria for the task.	• Create a paper template/mock-up. • Secure template to fabric when cutting out – include a seam allowance. • Use precise and accurate stitches to create a quality product for a user. • Create a seam and turn product inside out.	•Evaluate their ideas and products against design the criteria. •Explain the purpose of their design. •Follow their design to make their product. •Evaluate their product to make it and make changes if needed.
5	• Explore the work of Victoria Potroviza. How she is inspired by maps and landscape. • Experiment with a range of stitches – back stitch, satin stitch, running stitch, lazy daisy. • Sew two pieces of material together. • Sew a button onto a piece of material.	• Use an inspirational building or map to create a design for a piece of artwork to be sold in a tourist information shop. • Create simple designs considering a range of different embroidery techniques. • Create step-by-step plans for working.	• Accurately mark a piece of material. • Consider a neat front and the acceptance of an untidy rear when working. • Create templates to make accurate pieces of material to sew together.	• Evaluate both as the children proceed with their work and the final product in use, comparing the final product to the original design specification. • Critically evaluate the quality of the design, the manufacture, functionality, innovation shown and fitness for intended

	• Develop skills of threading a needle.			user and purpose, considering others' opinions.		
	Food Technology					
	Health Knowledge and Skills:	**Hygiene Knowledge and Skills:**	**Evaluating Products:**	**Preparing and Cooking:**	**Specific Food Skills:**	**Food Origins:**
R	•Talk about wellbeing related to healthy eating. •Start to think about the need for a variety of different foods available. •Know that being active is important for health.	•Use a knife, fork and spoon at mealtimes. •Know that hands should be washed before touching/working with food. •Know that utensils should be clean before cooking.	•Try new foods. •Explore familiar foods in more detail through observation, cutting up, smelling tasting e.g. fruit and vegetables. •Discuss appropriate use of senses e.g. when tasting different foods. •Identify similarities and differences between e.g. apples or citrus fruits. •Develop a food vocabulary using taste, smell, texture and feel. •Begin to develop sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky. •Use widening vocabulary in the correct context. •Identify differences before and after baking has taken place e.g. doughs, batters	•Follow simple instructions given by an adult. •Measure and weigh food items - non-statutory measures e.g. spoons, cups. •Stir, spread, knead and shape a range of food and ingredients e.g. dough. •Use vocabulary to describe how it feels…	• Cut - very soft foods with butter knife e.g. banana, canned peach slices. •Pull - pick grapes from vine. •Crush/mash - soft fruit with a potato masher or fork, e.g. raspberries as a topping. •Peel - by hand, e.g. satsuma, banana. •Shape - foods such as doughs by hand and with a rolling pin. •Mix/stir - with hands and utensils to loosely combine ingredients. •Spoon - ingredients between containers e.g. fairy cakes. •Measure - using a spoon or cup, e.g. dried herbs, dried fruit, flour. •Cut out - ingredients with a cutter, e.g. dough for scones. •Tear - fresh herbs.	•Know that food comes from different places around the world. •Know that some simple fruits come from trees e.g. apple, pear, orange. •Explore the life and impact of 'What's cooking Omari?'
1	•Know that food and water are required for life. •Know that we should be eating a range of foods on offer. •Know that the Eatwell plate tells us what to eat to	•Know how to wash hands thoroughly - NHS England •Know that clean hands, utensils and working areas are required when working with food. •Know about soapy hot	•Sort fruits by colour, texture, citrus etc •Develop a food vocabulary using taste, smell, texture and touch. •Explore similarities and differences with more	•Express preferences over taste, texture etc •Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create	•Cut - soft foods with a butter knife e.g. banana, canned peach slices. •Peel - by hand, e.g. satsuma, banana with a swivel peeler adult support •Spoon - ingredients	•Know that all food comes from either plants or animals. •Know where some fruits come from e.g. trees, grapes, strawberries from vines...

	have a healthy diet. •Begin to recognise that everyone should eat five portions of fruit and vegetables a day - give some examples of doing this e.g. apple for snack, peas at lunch time...	water to clean hands and utensils.	complex fruits. Do they look the same inside? •Say why certain choices have been made using taste, smell, texture and colour etc •Know that food waste should be avoided.	a chosen product. •Follow simple instructions independently. •Use simple drawings to record plan/ideas for a fruit kebab. •Use a butter knife to cut and assemble pieces of fruit to make a kebab. •Use a swivel peeler with adult support.	between containers. •Thread - thread soft foods onto kebab sticks. •Slide - use a fork to secure foods onto a kebab.	•Know that some fruits are grown on a farm and some can be grown at home. •Explore the life and impact of James Martin.
2	•Know that being active is important for health. •Know some foods in the five groups of the Eatwell Plate. •Know that fruits and vegetables are from the same section of the Eatwell plate. •Know that fruits and vegetables give us vitamins and minerals. •Recognise that everyone should eat at least five portions of fruit or vegetables every day and they can consume more than this.	•Know how to work safely and follow hygiene rules e.g. washing hands, tie hair back, use clean utensils, wash produce…	•Sort fruit and vegetables by varying criteria. •Give preferences with simple justifications about fruits and vegetables that they like using texture, taste, smell etc. •Develop a refining food vocabulary using taste, smell, texture and touch. •Measure amounts as per the recipe to make fruit and vegetable smoothies. Metric digital scales •Make predictions about colour and texture before blending foods - consider skins, seeds. •Use appropriate vocabulary to evaluate products made - positives and negatives. •Make suggestions for new smoothies giving reasons for choices using taste, smell, texture and colour etc.	•Follow a set of simple instructions/a recipe. •Use a safety knife with support to safely cut a variety of fruits and precooked vegetables. •Use and know safety rules when using a blender. •Demonstrate how to use techniques of cutting, peeling and grating.	•Cut - with a safety knife with adult support fruit and veg using the claw method e.g. carrot, celery. •Peel - with a swivel peeler with adult support. •Mix/stir - with increasing thoroughness to combine ingredients. •Mix/stir - whisk foods using a fork. •Spoon - ingredients into different containers with increasing accuracy and minimal spillage. •Measure - using different size measuring spoons, e.g. liquids. •Measure - refer to ingredients in simple fractions, e.g. half, quarter. •Snip - fresh herbs, spring onions. •Blend - use a blender to blitz fruits and vegetables with adult support.	•Know the names of some fruits and vegetables and where they come from. •Begin to know that food has to be farmed, grown elsewhere (e.g. home) or caught. •Explore the life and impact of Mindful Chef(s)
3	•Begin to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in the Eatwell	•Know and explain the importance of following safety and hygiene rules.	•Carry out sensory evaluations of a range of foods. •Begin to refine food vocabulary using taste,	•Develop understanding of how to use a range of techniques - peeling, chopping, slicing, grating, mixing, spreading.	•Measure - measure simply where required to meet the need of the task. •Peel - with a swivel peeler with supervision.	•Know some foods that are grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and

	plate. •Begin to understand that to be active and healthy, food and drink are needed to provide the right things for the body - protein, carbohydrate... •Name some foods in each section of the Eatwell plate and begin to know the significance of each – protein, carbohydrate… •Know that the types of foods that we regularly eat are called our diet. •Know a variety of foods are needed for us to remain healthy.		smell, texture and touch and link to preferences. •Make predictions about new foods based on preferences - I think I'll like it because…	•Use claw method to chop. •Generate and clarify ideas to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. •Use annotated sketches to develop and communicate ideas. •Join and combine a range of ingredients to make a healthy pitta pocket. •Select and use appropriate utensils and equipment to prepare and combine ingredients. •Select from a range of ingredients to make appropriate food products thinking about sensory characteristics. •Use appropriate vocabulary to evaluate products made.	•Mix/stir - any ingredients thoroughly. •Snip - items e.g. ham, spring onion. •Cut - with a safety knife cut food items into specific shapes to meet the task. •Spread - Use a butter knife to spread.	caught (such as fish) in the UK, Europe and the wider world. •Know that some foods are variants of others e.g. grapes and raisins. •Explore the life and impact of Heston Blumenthal
4	•Confidently name foods from each section of the Eatwell plate and begin to explore how common meal combinations fit into the plate proportions. •Know the role that carbohydrates play in a healthy diet as well as providing fibre. •Know that nutrients provided by the diet are released through the process of digestion.	•Know the importance of storing, preparing and cooking food safely and hygienically. •Know some ways to prepare ingredients safely and work hygienically explaining choices and reasons.	•Talk confidently about food choices and preferences with others. Question and respond to questions about their diet. •Talk about the five senses with regards to combinations of food e.g. I prefer it when it has spices in it. I like melted cheese on things because... •Evaluate how food combinations create new flavours and are more stimulating for each of the senses e.g. adding crunchy	•Know and use relevant technical and sensory vocabulary appropriately. •Work safely and hygienically. •Safely create warm food. •Use bridge and claw methods. •Analyse the taste, texture, smell and appearance of any food products that they make.	•Cut – with a safety knife medium resistant or partly prepared foods using a bridge hold, e.g. cut half a tomato into a quarter, halve canned potatoes, halve large grapes. •Make a simple stock? •Press - using a garlic press for garlic bread. •Peel - with a swivel peeler. •Grate - firmer foods, e.g. carrots, apples. •Measure - accurately measure the correct weight	•Explore how a range of items are farmed - grown, reared or caught. •Know that some foods have labels that tell us more about how they were grown or reared e.g. red tractor. •Begin to know that some foods go through processes before we buy and eat them - explore some. •Explore the life and impact of Jamie Oliver

			ingredients to soft ingredients.		of ingredients following a recipe. •Mix/stir - mix by hand and whisk foods using a hand-whisk. •Spread - ingredients evenly over another food.	
5	•Know about eating a rainbow and be able to give examples of how they do/how they could. •Talk about the health implications of their own diet in relation to the Eatwell plate e.g. I eat too many crisps, don't have enough fruit and vegetables…	•Know the importance of storing, preparing and cooking food safely and hygienically. •Know some ways to prepare ingredients safely and work hygienically explaining choices and reasons. •Know that many fruits and vegetables must be washed before use to remove any pesticides etc.	•Research different types of vegetable soup: leek and potato, carrot and coriander. •Understand that recipes can be adapted to change appearance, taste, texture and aroma. •Visit Morrisons to explore fresh seasonal locally grown produce. Country of origin.	•Confidently use bridge and claw methods to chop raw vegetables. •Know that a range of basic skills are required in food preparation. •Demonstrate a range of cooking techniques - frying, simmering. • Carry out sensory evaluation of soup discussing flavour, texture, availability of ingredients. • Discuss/explore variations and additions of made products such as bread, garnish, size of pieces of veg, blitzing.	•Snip - with greater dexterity and control, e.g. spring onion, slices of ham. •Cut - higher resistance food with a vegetable knife, using the claw grip, e.g. celery, carrots, tomato. •Peel - with a swivel peel to create food ribbons to be used in a dish, e.g. courgette/carrot ribbons with supervision. •Fry - fry off onions. •Mix/stir - fold ingredients together carefully. •Grate - using the zesting part of a grater, e.g. lemon, orange. •Cook - with supervision, cook scrambled egg in a pan. •Make - make a simple stock using a cube.	•Know some reasons for food choices e.g. diet, allergies, religion, culture •Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world - explore some processes. •Know some ways that farmers grow and care for products e.g. Pesticides etc. •Begin to explore the food miles of some products. •Begin to consider the environmental impact of buying some foods. •Explore ways that foods are preserved - canned, frozen, dried... •Know about use by and best before dates. •Begin to understand that seasonality affects the food available. •Experience a simple seasonality calendar. •Understand that some food is processed into ingredients that can be eaten or used in cooking. •Know and explore how

						seasonality links into traditions such as pumpkins for Halloween, turkey at Christmas, spring onions. •Explore the life and impact of Ainsley Harriet
6	• Confidently discuss meal combinations around the world in relation to the Eatwell plate e.g. shepherd's pie. • Be able to make healthy, informed choices and changes to meals e.g. type of chip, sauces, oil cooked in, salt.	• Independently use safety and hygiene rules. • Understand the importance of correct storage and handling of ingredients e.g. raw chicken, coloured chopping boards, sealed containers, how using a butter in a jam jar can cause jam to appear to go mouldy.	• Research a range of bread-based products and explore where they originate from e.g. naan, tortillas... • Recognise variations historically, religiously, culturally and practically e.g. cobs, hot cross buns, chapattis. • Understand the need for a rising agent (yeast) or not and the need to prove dough, or not. • Begin to know about additives such as preservatives to keep foods fresher for longer. • Research ways that bread can be healthier/unhealthier (is it really?) - brown/wholemeal, use of butter/ toppings/ fillings, croissants.	• Make bread-based items of food using a range of appropriate techniques including accurate weighing of ingredients. • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Create and refine recipes, including healthy seasonal ingredients, methods, cooking times and temperatures. • Create own recipe including list of ingredients, equipment and method for a purpose. • Know how to use appropriate equipment and utensils to prepare	• Cut - higher resistance food with a vegetable knife, using the claw grip, e.g. carrots, tomato. • Mix/stir - fold ingredients together carefully. • Sieve – use a sieve where appropriate. • Combine - combine wet and dry ingredients to make a variety of bread-based products. *Depending on choice of bread item:* • Crack - crack an egg into a cup. Possibly separate. • Peel - with a swivel peel to create food ribbons to be used in a dish, e.g. courgette/carrot ribbons with supervision.	• Know the factory process of making bread including the part farmers play. Compare it to a homemade process. • Begin to know about additives such as preservatives to keep foods fresher for longer. • Consider seasonality implications with any products evaluated and made. • Know about the work done by Fairtrade. • Explore the life and impact of Paul Hollywood

	Electrical Systems			
	Evaluate and Experiment:	**Consider and Design:**	**Make:**	**Self-evaluate:**
4	• Safely disassemble battery operated items identify components and how they are secured within. • Consider materials used and their properties. • Investigate a range of switches used in everyday items as well as others. • Experiment with ways of making own switches e.g. tinfoil on folded card, paperclip tilt switch...	• Create own set of success criteria based on battery operated product that they will make considering purpose and audience. • Create annotated diagrams and exploded diagrams and discuss intentions. • Create a plan of action for their building process. • Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.	• Follow their own plan of action for the making process. • Select from and use appropriate tools and equipment to cut, shape, join and finish with some accuracy. • Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities.	• Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.

	• Explore ways of making secure connections. • Know about the dangers of electricity. • Learn ways to prevent short circuits. • Build on Year 3 knowledge about shell product purposes. • Explore making more complicated 3D shell shapes from nets.			
6	• Using research, discuss a range of relevant products that respond to changes in the environment using a computer control program such as automatic nightlights, alarm systems, security lighting e.g. Who have the products been designed for and for what purpose? • Investigate electrical sensors such as light dependent resistors (LDRs) and a range of switches such as push-to-make switches, push-to-break switches, toggle switches, micro switches and reed switches. To gain an understanding of how they are operated by the user and how they work, children to use each component to control a bulb in a simple circuit. • Remind children about the dangers of mains electricity. • Children could research famous inventors related to the project e.g. Thomas Edison – light bulb.	• Use research to develop a design specification for a functional product that responds automatically to changes in the environment. Take account of constraints including time, resources and cost. • Generate and develop innovative ideas and share and clarify these through discussion. • Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. • Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.	• Select from and use a wide range of tools. • Cut accurately and safely to a marked line. • Select from and use a wide range of materials. • Use appropriate finishing techniques for the project. • Refine their product – review and rework/improve. • Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product.	• Continually evaluate and modify the working features of the product to match the initial design specification. • Test the system to demonstrate its effectiveness for the intended user and purpose. • Investigate famous inventors who developed ground-breaking electrical systems and components