EYFS		
Development matters age range	**ELG framework**	**Programme of Study**
EYFS Three and Four-Year-Olds	Personal, Social and Emotional Development	• Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.
	Physical Development	• Use large-muscle movements to wave flags and streamers, paint and make marks. • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors
	Understanding the World	• Explore how things work.
	Expressive Arts and Design	• Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
Reception	Physical development	• Progress towards a more fluent style of moving, with developing control and grace. • Develop their small motor skills so that they can use a range of tools competently, safely and confidently. • Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor
	Expressive Arts and Design	• Explore, use and refine a variety of artistic effects to express their ideas and feelings. • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills
ELG	Physical development	• Use a range of small tools, including scissors, paintbrushes and cutlery.
	Expressive Arts and Design	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used.

Key Stage 1 National Curriculum

- Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].
- When designing and making, pupils should be taught to:
    - Design - design purposeful, functional, appealing products for themselves and other users based on design criteria
    - Generate - develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology
    - Make - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
    - Evaluate - explore and evaluate a range of existing products, evaluate their ideas and products against design criteria
    - Technical knowledge - build structures, exploring how they can be made stronger, stiffer and more stable, explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Key stage 1

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

Year 1			
Unit	**Structures** **A free standing windmill with moving parts**	**Mechanical Systems** **Moving vehicles**	**Cooking & Nutrition** **Preparing Fruit & Vegetables**
Overview	The children will begin to learn about simple freestanding structures. They will experiment with a range of recycled materials before selecting the best ones to use. They will experiment with different ways of making their structure more stable and will investigate the best joining techniques to use. Once completed, they will judge how effective their design has been. **Children will make a free standing windmill**	The children will begin to learn about simple mechanisms. They will experiment with a range of resources before designing and making a vehicle with free running wheels. The children will experiment with different types of axle and axle holders before selecting which one to use in their design. Once their vehicle has been tested, they will evaluate how well it suits the needs of the users before thinking of what they would do differently next time. **Children will make a moving vehicle for small world toys**	The children will begin to learn about basic cooking methods and nutrition. They will begin by exploring where a range of fruit and vegetables come from before deciding which ones to use in a simple recipe. They will then learn how to weigh and prepare the fruit and vegetables safely and hygienically before evaluating the final product and suggesting improvements which could be made. **Children will make a smoothie**
Knowledge and skills	**Designing** • **Generate** ideas based on simple design criteria and their own experiences, explaining what they could make. • Develop, model and communicate their ideas through talking, mock-ups and drawings. **Making** • Plan by suggesting what to do next. • Select and use tools, skills and techniques, explaining their choices. • Select new and reclaimed materials and construction kits to build their structures. • Use simple finishing techniques suitable for the structure they are creating. **Evaluating** • Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. • Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria. **Technical knowledge and understanding** • Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical vocabulary relevant to the project	**Design** a vehicle based upon a simple design criteria **Generate** ideas **Make** vehicles with construction kits which contain free running wheels e.g. tubes, dowel, cotton reels •Attach wheels to a chassis using an axle and axle holder •Join appropriately for different materials and situations e.g. glue or tape •Mark out materials to be cut using a template • Use appropriate vocabulary **Evaluate** the effectiveness of the design Technical knowledge and understanding	• **Design** appealing products for a particular user based on simple design criteria. • **Generate** initial ideas and design criteria through investigating a variety of fruit and vegetables. • Communicate these ideas through talk and drawings. **Making** • Follow rules for safety and hygiene Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. • Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. **Evaluating** • Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. • Evaluate ideas and finished products against design criteria, including intended user and purpose. **Technical knowledge and understanding** • Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell plate. • Know and use technical and sensory vocabulary relevant to the project.
Vocabulary	cut, fold, join, fix, structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic, circle, triangle, square, rectangle, cuboid, cube, cylinder, design, make, evaluate, user, purpose, ideas, design criteria, product, function	Construct, axle, chassis, join, wheels, vehicle, template	fruit and vegetable names, names of equipment and utensils, sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard, flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria

Year 2			
Unit	**Sliders and levers**	**Textiles -Templates and joining techniques**	**Food technology**
Overview	The children will make **a class/group storybook or greetings card** class/group information book, storyboard based on class story or poem with moving parts.	The children will begin to develop their textiles skills. They will learn about and make their own templates to create fabric shapes. These shapes will then be joined using simple stitches before being decorated with embellishments. **Make a fabric pouch**	The children will continue to learn about different cooking methods and nutrition. They will continue to explore where a range of fruit and vegetables come from and how healthy they are before deciding which ones to use in a simple recipe. They will learn how to prepare the fruit and vegetables safely and once made, they will evaluate whether their product could be improved and what they would do differently next time. **savoury, making a healthy sandwich**
Knowledge and skills	**Designing** • Generate ideas based on simple design criteria and their own experiences, explaining what they could make. • Develop, model and communicate their ideas through drawings and mock-ups with card and paper. Making • **Plan** by suggesting what to do next. **Make** Select and use tools, explaining their choices, to cut, shape and join paper and card. • Use simple finishing techniques suitable for the product they are creating. Evaluating • Explore a range of existing books and everyday products that use simple sliders and levers. • **Evaluate** their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria. **Technical knowledge and understanding** • Explore and use sliders and levers. • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project.	**Designing and plan** • Design a functional and appealing product for a chosen user and purpose based on simple design criteria. • Generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology. **Making** • Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. • Select from and use textiles according to their characteristics. **Evaluating** • Explore and evaluate a range of existing textile products relevant to the project being undertaken. • Evaluate their ideas throughout and their final products against original design criteria. **Technical knowledge and understanding** • Understand how simple 3-D textile products are made, using a template to create two identical shapes. • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. • Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons. • Know and use technical vocabulary relevant to the project.	**Designing** • Design appealing products for a particular user based on simple design criteria. **Plan** • Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. • Communicate these ideas through talk and drawings. **Making** • Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. • Select from a range of breads, protein fillings and fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. **Evaluating** • Taste and evaluate a range of sandwiches, breads, sandwich fillings and fruit and vegetables to determine the intended user's preferences. • Evaluate ideas and finished products against design criteria, including intended user and purpose. **Technical knowledge and understanding** • Understand where a range of foods come from e.g. farmed or grown at home and how bread is made • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell plate. • Know and use technical and sensory vocabulary relevant to the project.
Vocabulary	Turn, sketch, slider, lever, pivot, slot, wheel, bridge/guide, finish, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards, design, make, evaluate, user, purpose, ideas, design criteria, product, function	names of existing products, joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish, stitch, thread, needle, features, suitable, quality mock-up, design brief, design criteria, make, evaluate, user, purpose, function	Eatwell plate model, Names of food groups, Names of different breads (wraps, bagels, rolls etc), Names of different protein fillings and fruit or vegetables that can be added, Names of tools used in preparation Vocabulary related to health, hygiene and safety

Key stage 2 National Curriculum

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Understand how key events and individuals in design and technology have helped shape the world Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to Key stage 2

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Year 3			
Unit	**Mechanical systems**	**Food technology**	**Structures**
Overview	Make a pneumatic toy The children will begin to learn about simple mechanical systems. They will use a combination of pneumatics, levers and linkages to create a moving object. They will experiment with different materials to create pivots and simple pneumatics. Once their object is created, they will evaluate how effective the design has been and what could improvements could be made.	**Making vegetable soup** Recapping the Eatwell plate, the children will learn how to make a healthy vegetable soup – recapping food hygiene	**shell structures** - for example gift boxes, desk tidy lunchboxes, packaging for a food, party boxes, mystery boxes, toy car body shell, money boxes
Knowledge and skills	**Designing** • Generate realistic and appropriate ideas and their own design criteria through discussion, focusing on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas. **Making** • Order the main stages of making. • Select from and use appropriate tools with some accuracy 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. **Evaluating** • Investigate and analyse books, videos and products with pneumatic mechanisms. • Evaluate their own products and ideas against criteria and user needs, as they design and make. **Technical knowledge and understanding** • Understand and use pneumatic mechanisms. • Know and use technical vocabulary relevant to the project.	**Designing** • Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. • Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. Taste a range of soups to help generate ideas. **Making** • Plan the main stages of a recipe, listing ingredients, utensils and equipment. • 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. **Evaluating** • Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. • Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. **Technical knowledge and understanding** • Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.	**Designing** • Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the product. • Develop ideas through the analysis of existing shell structures and use computer-aided design to model and communicate ideas. **Making** • Plan the order of the main stages of making. • Select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with some accuracy. • Explain their choice of materials according to functional properties and aesthetic qualities. • Use computer-generated finishing techniques suitable for the product they are creating. **Evaluating** • Investigate and evaluate a range of shell structures including the materials, components and techniques that have been used. • Test and evaluate their own products against design criteria and the intended user and purpose. **Technical knowledge and understanding** • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Develop and use knowledge of how to construct strong, stiff shell structures. • Know and use technical vocabulary relevant to the project.
Vocabulary	components, fixing, attaching, tubing, syringe, plunger, split pin, paper fastener pneumatic system, input movement, process, output movement,	name of products, names of equipment, utensils, techniques and ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference,	shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring,

	control, compression, pressure, inflate, deflate, pump, seal, air-tight linear, rotary, oscillating, reciprocating user, purpose, function, prototype, design criteria, innovative, appealing, design brief, research, evaluate, ideas, constraints, investigate	greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet, planning, design criteria, purpose, user, annotated sketch, sensory evaluations	shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision, evaluating, design brief design criteria, innovative, prototype

Year 4			
Unit	**Programming and electrical systems**	**Textiles**	**Food technology**
Overview	**Possible outcomes: siren for a toy vehicle, reading light, noise-making toy, nightlight, illuminated sign, torches, table lamp, lighting for display, hands-free head lamp, buzzer for school office** The children will begin to learn about electrical systems. They will construct simple electrical circuits using bulb, switches and buzzers and understand how to find a fault and how to correct it. The children will develop their technical vocabulary and be able to use it appropriately.	**Making a soft toy** In this unit, the children will continue to develop their textiles skills. They will use templates to cut out pattern pieces which will then be joined together using a range of different stitches. They will then think about different decoration techniques and choose the most appropriate for their design.	**Biscuits**
Knowledge and skills	**Designing** • Gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. • Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. **Making** • Order the main stages of making. • Select from and use 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. **Evaluating** • Investigate and analyse a range of existing battery-powered products. • Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. **Technical knowledge and understanding** • Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. • Apply their understanding of computing to program and control their products. • Know and use technical vocabulary relevant to the project.	**Designing** ○ Gather information about the needs and wants of particular individuals and groups ○ Model ideas using prototypes and pattern pieces ○ Use annotated sketches and diagrams to develop and communicate ideas **Making** ○ Select tools, equipment and materials suitable for the task and be able to explain the choice according to functional properties and aesthetic qualities ○ Assemble, join and combine materials and components with some accuracy **Evaluating** ○ identify the strengths and areas for development in their ideas and products – ○ Discuss how well the finished product meets the design criteria ○ Consider the views of others, including intended users, to improve their work **Technical knowledge and understanding** ○ Know about designers and manufacturers who have developed ground-breaking products	**Designing** • Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. • Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. • Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. **Making** • Write a step-by-step recipe, including a list of ingredients, equipment and utensils • Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. • Make, decorate and present the food product appropriately for the intended user and purpose. E**valuating** • Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. • Evaluate the final product with reference back to the design brief and design specification, considering the views of others when identifying improvements. • Understand how key chefs have influenced eating habits to promote varied and healthy diets. **Technical knowledge and understanding** • Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products.

			• Know and use relevant technical and sensory vocabulary.
Vocabulary	series circuit, fault, connection, toggle switch, push-to-make switch, push to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, user, purpose, function, prototype, design criteria, innovative, appealing, design brief	Blanket stitch, applique, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, mock up, prototype	ingredients, flour, spice, , fat, sugar, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, source, seasonality, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble, design specification, innovative, research, evaluate, design brief

Year 5			
Unit	**Frame structures - make a model bridge**	**Food technology – making a healthy sauce to accompany pasta**	**Mechanical systems – pulleys and gears for example fairground ride with gears or pulleys**
Overview	In this unit, the children will continue to develop their understanding of structures. They will experiment with a range of materials and choose the most suitable based on its functional and aesthetic qualities before making a prototype. They will then create a frame structure with diagonal struts to strengthen.	The children will continue to develop their understanding of cooking and nutrition. They will select and prepare food, taking into account its properties and sensory characteristics. They will weigh, prepare and combine the ingredients using a range of methods and equipment safely and hygienically	In this unit, the children will continue to develop their understanding of mechanical systems. They will find out how to use pulleys and gears to create movement. They will design and build frameworks using a range of materials to support their mechanisms and they will begin to learn how to use a range of tools safely.
Knowledge and skills	**Designing** • Carry out research into user needs and existing products,. • Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. • Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. Prototype shell structures **Making** . • Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. • Use finishing and decorative techniques suitable for the product they are designing and making. ●Create frame structures ● Make structures more stable by giving them a wide base ●Strengthen shells with diagonal struts ● Choose materials based on their functional properties and aesthetic qualities ● Measure and mark square selection, strip and dowel accordingly to 1cm ●Use glue gun with close supervision (one to one) ●Investigate joining techniques with different materials **Evaluating** • Investigate and evaluate a range of existing frame structures. • Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.	**Designing** • Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. • Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. • Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. Taste a range of dishes and carbohydrates to generate ideas **Making** • Write a step-by-step recipe, including a list of ingredients, equipment and utensils • Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. • Make, decorate and present the food product appropriately for the intended user and purpose. **Evaluating** • Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. • Evaluate the final product with reference back to the design brief and design specification, considering the views of others when identifying improvements. • Understand how key chefs have influenced eating habits to promote varied and healthy diets. **Technical knowledge and understanding** • Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products.	**Designing** • Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. • Develop a simple design specification to guide their thinking. • Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. **Making** • Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost. **Evaluating** • Compare the final product to the original design specification. • Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • Consider the views of others to improve their work. • Investigate famous manufacturing and engineering companies relevant to the project. **Technical knowledge and understanding** • Understand that mechanical and electrical systems have an input, process and an output. • Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. Know and use technical vocabulary relevant to the project.

	• Research key events and individuals relevant to frame structures. **Technical knowledge and understanding** • Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevant to the project.	• Know and use relevant technical and sensory vocabulary.	
Vocabulary	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent, design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional	Recipe, Ingredients, rice, pasta, couscous, seasonings, sauce, names of seasonal vegetables, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, rinse, measure, weigh, pour, boil, simmer, chop, slice, grate, mix, combine, season, design specification, innovative, research, evaluate, design brief	pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams mechanical system, electrical system, input, process, output, design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief

Year 6			
Unit	**Textiles – combining fabric shapes to make a waistcoat**		**Electrical systems using more complex switches and circuits to make a handheld game**
Overview	The children will continue to develop their textile skills. They will understand about pattern layout and will pin and tack pieces of fabric together before joining them with a range of stitches. They will decorate the fabric and explore different types of fastenings.		The children will continue to develop their understanding of electrical systems. They will be introduced to the basics of electromagnetic motors and will create their own. They will create an electrical circuit using a bulb, switch or buzzer and understand how to find a fault and how to correct it.
Knowledge and skills	**Designing** • Generate innovative ideas by carrying out research including surveys, interviews and questionnaires. • Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design. • Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. **Making** • Produce detailed lists of equipment and fabrics relevant to their tasks. • Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost. **Evaluating** • Investigate and analyse textile products linked to their final product. • Compare the final product to the original design specification. • Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • Consider the views of others to improve their work. **Technical knowledge and understanding** • A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Fabrics can be strengthened, stiffened and reinforced where appropriate		**Designing** • 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. • Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams. **Making** • Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. • Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product. • Create and modify a computer control program to enable an electrical product to work automatically in response to changes in the environment. **Evaluating** • 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. **Technical knowledge and understanding** • Understand and use electrical systems in their products. • Apply their understanding of computing to program, monitor and control their products. • Know and use technical vocabulary relevant to the project.

Vocabulary	seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, iron transfer paper, design criteria, annotate, design decisions, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype		series circuit, parallel circuit, names of switches and components, input device, output device, system, monitor, control, program, flowchart, function, innovative, design specification, design brief, user, purpose