Bruche Primary School Design and Technology

Curriculum INTENT

CORE VALUES: CHILDREN FIRST RESILIENCE PIONEERING

Bruche Primary School- Design and Technology progression through EYFS
EAD: Creating with Materials & Being Imaginative and Expressive

Playing & Exploring - Engagement	Active Learning - Motivation	Creating & Thinking Critically - Thinking
• Finding out & exploring • Playing with what they know • Being willing to 'have a go'	• Being involved & concentrating • Keep on trying • Enjoying achieving what they set out to do	• Having their own ideas (creative thinking) • Making links (building theories) • Working with ideas (critical thinking)

ELG
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- Share their creations, explaining the process they have used
- Make use of props and materials when role-playing characters in narratives and stories

Focus	Designing	Making	Evaluating	Technical Skills	Food Technology	Vocabulary- To be used daily.
Nursery Skills	• Develop own ideas & decide which materials to use to express them	• Use various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces • Use available resources to create props or creates imaginary ones to support play	• Notice what other children & adults do, mirroring what is observed, adding variations & then doing it spontaneously	• Develop new skills & techniques • Use tools for a purpose	• Talk about the differences between materials & changes they notice • Make healthy choices	Like/ dislike Use, cut, snip, press, fold, join, fix, glue, stick, bumpy, smooth, shiny, hard, soft, rough, fruit, vegetables, healthy, unhealthy, different.

Nursery Knowledge	**Autumn 1** Colours and feelings	**Autumn 2** Families and Celebrations	**Spring 1** Traditional Tales and farm animals	**Spring 2** Growing and changing	**Summer 1** Adrift	**Summer 2** Chester Zoo
	•To sort by colour a range of objects and materials. •Can make snips in paper using a two-handed scissor grip. •Can use glue to join pieces	•Can build a representation of own home using a mixture of materials. •Can use a range of tools- rolling pin, cutters, extruders, scissors, hole punch, Sellotape dispenser independently.	•Can match animals to the food they produce. •Can explain what healthy and unhealthy means.	•Can use a range of materials to join, glue, string, cotton, Sellotape •Can make own designs from junk modelling materials	•Can use a variety of different materials to create a variety of homes and structures such as caravans, houses, barges, mud huts etc.	•Can create animal habitats using a range of different materials and textures and explain their choices. •Can use a range of tools- rolling pin, cutters, extruders, scissors, hole punch, Sellotape dispenser independently and with accuracy.

Children to be exposed to key vocabulary daily in provision. High quality resources will be provided for daily accessibility. Playdough/ Malleable/Art/building/small world and outdoor provisions will provide a wealth of opportunity. Resources will be enhanced and developed as children develop their skill set.

Bruche Primary School- Design and Technology progression through EYFS
EAD: Creating with Materials & Being Imaginative and Expressive

Playing & Exploring - Engagement	Active Learning - Motivation	Creating & Thinking Critically - Thinking
• Finding out & exploring • Playing with what they know • Being willing to 'have a go'	• Being involved & concentrating • Keep on trying • Enjoying achieving what they set out to do	• Having their own ideas (creative thinking) • Making links (building theories) • Working with ideas (critical thinking)

ELG
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- Share their creations, explaining the process they have used
- Make use of props and materials when role-playing characters in narratives and stories

Focus	Designing	Making	Evaluating	Technical Skills	Food Technology	Vocabulary- To be used daily.
Reception Skills	• Develop own ideas through experimentation with diverse materials to express & communicate their discoveries & understanding • Create collaboratively sharing ideas, resources & skills	• Use increasing knowledge & understanding of tools & materials to explore their interests & enquiries & develop their thinking • Create representations both imaginary & real-life ideas, events, people & objects	• Express & communicates working theories, feelings & understandings • Responds imaginatively to art works & objects • Return to & build on previous learning, refining ideas & developing their ability to represent them • Discuss problems & how they might be solved	• Use different techniques for joining materials • Use tools independently, with care & precision	• Look closely at similarities, differences, patterns & change • Know & talk about the different factors that support their overall health & well-being	Cutting, measure, folding, joining, gluing, tearing, decorate, printing, tools, strong, shape, materials, textiles, wheels, equipment, like, dislike, improve, better, cutting, plants, animals, farming, foods.

Reception Knowledge	**Autumn 1** All about Me	**Autumn 2** Families and Celebrations	**Spring 1** Up and Down	**Spring 2** Growing and changing	**Summer 1** Fairy Tales/ Adrift – Houses and Homes	**Summer 2** Chester Zoo
	•Can work together to make structures eg building a house/home/school. • Can use colour and materials to express how they are feeling through own creations using a variety of textures.	• Can use an increasing range of tools such as; building tools and gardening tools with accuracy. • Begins to talk about the effect of exercise and food on their health.	• Can create own representations in relation to space and sea; explain how they work and what they have used and why. • Can use an increasing range of small construction such as mobilo, Lego, stickle bricks and octagons to make representations including some moving parts.	• 'From food to fork'. Understand where food comes from and experience growing their own vegetables, harvesting, preparing, and eating. • Can brush own teeth and talk about the importance of good oral health.	• Can draw designs for the things that they build and label each element. • Can verbally evaluate their work and explain what is good and one thing that could make it better.	•To use a range of materials and split pins to connect and join materials to make a moving puppet.
	Food		Mechanisms		Structures	

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Year 1: Design and Technology skills progression

KS1: POS

- Use the basic principles of a healthy and varied diet to prepare dishes.
- To understand where food comes from.
- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- 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.
- Explore and evaluate a range of existing products.
- Explore and use mechanisms [for example levers, sliders, wheels and axles], in their products.
- 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 and prototypes.
- Select from tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.
- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria.

Design

- Design appealing products for a particular user based on simple design criteria.
- Communicate these ideas through talk and drawings.
- 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.

Make

- Use simple utensils and equipment to peel, cut and squeeze safely.
- Select from a range of fruit and vegetables according to their characteristics
- e.g. colour, texture and taste to create a chosen product.
- Plan by suggesting what to do next.
- 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.
- Select and use tools, skills and techniques, explaining their choices.
- Select new and reclaimed materials and construction kits to build their structures.

Evaluate

- Taste and evaluate a range of fruit and vegetables to determine the intended users' preference.
- 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.
- Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings.

Technical Knowledge

- 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.
- Explore and use sliders and levers.
- Understand that different mechanisms produce different types of movement.
- Know how to make freestanding structures stronger, stiffer and more stable.

Year 1 – End points	
Food – Preparing fruit and vegetables	• 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.
Mechanisms – Sliders and Levers	• Explore and use sliders and levers. • Understand that different mechanisms produce different types of movement
Structures – Freestanding structures	• Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical and sensory vocabulary relevant to the project.

Year 2: Design and Technology skills progression

KS1: POS

- Use the basic principles of a healthy and varied diet to prepare dishes.
- To understand where food comes from.
- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- 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.
- Explore and evaluate a range of existing products.
- Explore and use mechanisms [for example levers, sliders, wheels and axles], in their products.
- 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 and prototypes.
- Select from tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.
- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria.

Design

- 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.
- 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.
- Generate initial ideas and simple design criteria through talking and using own experiences.
- Develop and communicate ideas through talk, drawings and mock-ups.

Make

- 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.
- 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.
- Select from and use a range of 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.

Evaluate

- 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.
- 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.
- Explore and evaluate a range of products with wheels and axles.

Technical Knowledge

- 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.
- Explore and use wheels, axles and axle holders.
- Distinguish between fixed and freely moving axles.

- 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.

Year 2 – End points	
Food – Preparing fruit and vegetables	• 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 vocabulary relevant to the project.
Textiles- Templates and Joining Techniques	• 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.
Mechanisms- Wheels and Axels	• Explore and use wheels, axles and axle holders. • Distinguish between fixed and freely moving axles.

Year 3: Design and Technology skills progression	
KS2- POS • To 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 • To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. • To 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. • To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • 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. • 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. • To understand how key events and individuals in design and technology have helped shape the world • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • To understand and use mechanical systems in their products. • To understand and use electrical systems in their products. • Apply their understanding of computing to program, monitor and control their products.	**Design** • Generate realistic 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. • 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. • Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas.
Make • Order the main stages of making. • Select from and use finishing techniques suitable for the product they are creating. • 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. • Select and use appropriate tools 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 finishing techniques suitable for the product they are creating.	**Evaluate** • Investigate and analyse books and, where available, other products with lever and linkage mechanisms. • Evaluate their own products and ideas against criteria and user needs, as they design and make. • 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. • Investigate and evaluate a range of existing 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 • Understand and use lever and linkage mechanisms. • Distinguish between fixed and loose pivots. • 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.	• Develop and use knowledge of how to construct strong, stiff shell structures. • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Know and use technical vocabulary relevant to the project. • Know and use relevant technical and sensory vocabulary appropriately.

Year 3 – End points	
Levers and Linkages (Mechanical Systems)	• Understand and use lever and linkage mechanisms. • Distinguish between fixed and loose pivots.
Cooking and Nutrition (Healthy and Varied Diet)	• Know how to use appropriate equipment and utensils to prepare and combine food.
Shell Structures	• Develop and use knowledge of how to construct strong, stiff shell structures. • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. Know and use technical vocabulary relevant to the project.

Year 4: Design and Technology skills progression

KS2- POS

- To 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
- To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.
- To 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.
- To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- 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.
- 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.
- To understand how key events and individuals in design and technology have helped shape the world
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- To understand and use mechanical systems in their products.
- To understand and use electrical systems in their products.
- Apply their understanding of computing to program, monitor and control their products.

Design

- 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.
- Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s.
- Produce annotated sketches, prototypes, final product sketches and pattern pieces

Make

- 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.
- Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities.
- Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing.
- Select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern.

Evaluate

- Investigate and analyse books, videos and products with pneumatic mechanisms.
- Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.
- Investigate a range of 3-D textile products relevant to the project.
- Take into account others' views.
- Understand how a key event/individual has influenced the development of the chosen product and/or fabric.

Technical Knowledge

- Understand and use pneumatic mechanisms.
- Know and use technical vocabulary relevant to the project.
- 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 how to strengthen, stiffen and reinforce existing fabrics.
- Understand how to securely join two pieces of fabric together.
- Understand the need for patterns and seam allowances.

Year 4 – End points

Pneumatics	• Understand and use pneumatic mechanisms.
Electrical Systems- Circuits and Switches	• 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.
Textiles- 2D shapes to a 3D product	• Know how to strengthen, stiffen and reinforce existing fabrics. • Understand how to securely join two pieces of fabric together. • Understand the need for patterns and seam allowances.

Year 5: Design and Technology skills progression

KS2- POS

- To 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
- To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.
- To 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.
- To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- 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.
- 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.
- To understand how key events and individuals in design and technology have helped shape the world
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- To understand and use mechanical systems in their products.
- To understand and use electrical systems in their products.

Design

- 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, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computeraided design.
- Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification.
- 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.

Make

- 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.
- 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.

Evaluate

- 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.
- Investigate famous manufacturing and engineering companies relevant to the project.
- 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.
- Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.

Technical Knowledge

- 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
- 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.
- 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.

Year 5 – End points

Mechanical Systems (Pulleys and Gears)	• 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.
Textiles (Combining different fabrics)	• 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.
Food and Nutrition (Celebrating Culture and Seasonality)	• Know how to use utensils and equipment to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products

Year 6: Design and Technology skills progression

KS2- POS

- To 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
- To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.
- To 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.
- To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- 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.
- 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.
- To understand how key events and individuals in design and technology have helped shape the world
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- To understand and use mechanical systems in their products.
- To understand and use electrical systems in their products.
- Apply their understanding of computing to program, monitor and control their products.

Design

- 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.
- Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources.
- 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.

Make

- 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.
- 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.

Evaluate

- 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.
- 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.
- Research key events and individuals relevant to frame structures.

Technical Knowledge

- 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.
- Understand how to strengthen, stiffen and reinforce 3-D frameworks. Know and use technical vocabulary relevant to the project.

Year 6 – End points

Electrical Systems (More Complex Switches and Circuits)	• Understand and use electrical systems in their products. • Apply their understanding of computers to program, monitor and control their products. • Understand about seasonality in relation to food products and the source of different food products. 698
Textiles (Framed Structures)	• Understand how to strengthen, stiffen and reinforce 3-D frameworks.