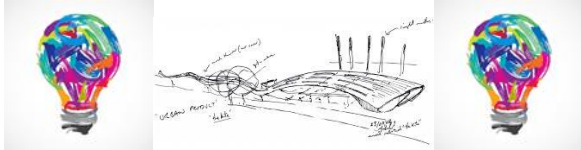


### **Design**

Children design their own products based on a design criteria using talk, drawings and computer programmes to generate ideas.



### **Make**

Children select appropriate tools for practical tasks from a wide range of materials and components.



### **Evaluate**

Children learn to reflect on both what worked well in current products on the market and how they could have improved their final work both individually and by feedback from others.



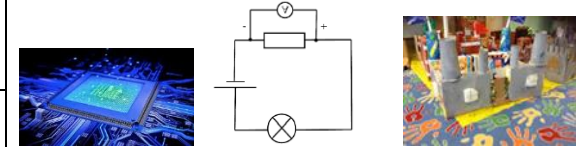
## Design and Technology 2018-2019

At Cranmere, we understand and value the analysis, problem solving and application skills that design technology instils in children. We have recognised that although the cooking area is used regularly for interventions, such as Elsa and Baking Group, we are working to encourage its regular use as a facility for year groups which are not accessing this provision on a regular basis and ensure that it is being utilised to its full potential. Following analysis of D&T work, alongside pupil voice it is evident that all children thoroughly enjoy all aspects of Design and Technology across the school, and we are raising its profile so that there is a cohesive approach for planning and delivery from early years to Year 6 to ensure that all aspects of the Design Technology curriculum are met.



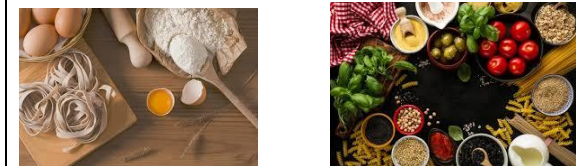
### **Technical knowledge**

Children will build structures, exploring and applying their knowledge of how to strengthen them, exploring and applying their knowledge of mechanisms including electrical components and computing programmes.



### **Cooking and Nutrition**

This essential life skill is taught to the children, instilling the principles of healthy eating and nutrition which aims to develop a love and basic understanding of cooking.



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	Autumn Term	Spring Term	Summer Term
Nursery	<p>Experiments with blocks, colours and marks. Beginning to be interested in and describe the texture of things. Uses various construction materials. Exploring a variety of textures, media and materials through sensory play. Beginning to recognise danger and seeks support of significant adults for help.</p>	<p>Joins construction pieces together to build and balance. Realises tools can be used for a purpose. Exploring a variety of textures, media and materials through sensory play. Understands that equipment and tools have to be used safely</p>	<p>Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. Joining and constructing with a range of materials, experimenting with building and balancing. Exploring a variety of textures, media and materials through sensory play. Understands that equipment and tools have to be used safely</p>
Reception	<p>Using tools for a purpose. Exploring media and materials Finding out what can be done with different media and what happens when we different things together such as sand, paint and sawdust. Combining different media to create new effects. Manipulating materials to achieve a planned effect. Shows understanding of the need for safety when tackling new challenges, and considers and manages some risks.</p>	<p>Constructing with a purpose in mind, using a variety of resources. Using simple tools and techniques competently and appropriately. Selecting appropriate resources and adapting work where necessary. Selecting tools and techniques needed to shape, assemble and join materials they are using Shows understanding of how to transport and store equipment safely.</p>	<p><b>Early Learning Goal</b> Children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.  Practices some appropriate safety measures without direct supervision.</p>
Year 1	<p><b>Design a puppet</b> 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. Select from and use a range of tools and equipment to perform practical tasks (eg 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. Evaluate their ideas and products against design criteria. <b>Making Soup:</b> Use the principles of a healthy and varied diet to prepare dishes. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.</p>	<p><b>Make a moving object</b> Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms (eg levers, sliders, wheels, axles), in their products. Design purposeful, functional, appealing products for themselves and other users based on design criteria. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.  <b>UK food and healthy eating</b> Understand where food comes from. Use the principles of a healthy and varied diet to prepare dishes.</p>	

<p><b>Year 2</b></p>	<p><b>Bread Roll making (Great Fire of London)</b> Design purposeful, functional, appealing products for themselves and other users based on design criteria. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Understand where food comes from. Use the principles of a healthy and varied diet to prepare dishes.</p> <p><b>Tudor Houses</b> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. Build structures, exploring how they can be made stronger, stiffer and more stable. Evaluate their ideas and products against design criteria.</p>		<p><b>Boats</b> Design purposeful, functional, appealing products for themselves and other users based on design criteria. Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms (eg levers, sliders, wheels, axles), in their products. Evaluate their ideas and products against design criteria.</p>
<p><b>Year 3</b></p>	<p><b>Sun Dials</b> Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. Critique, evaluate and test their ideas and products and the work of others. 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. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p>	<p><b>Levers - UK landmarks relating to travel</b> Understand how key events and individuals in design and technology have helped shape the world. Understand and use mechanical systems in their products. 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.</p>	<p><b>Food project with younger year group (TBC)</b> Investigate and analyse a range of existing products. 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.</p>
<p><b>Year 4</b></p>	<p><b>Making Mosaics</b> 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. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p>		<p><b>Money pouches</b> Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>

	<p>Understand how key events and individuals in design and technology have helped shape the world. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p><b>Light Box Theatre</b> Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. 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. 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. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p>		<p>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.</p> <p><b>WW2 cookery</b> 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.</p>
Year 5	<p><b>Cars</b> Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users Critique, evaluate and test their ideas and products and the work of others 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p><b>Space</b> Understand how key events and individuals in design and technology have helped shape the world</p>	<p><b>Soup</b> 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 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.</p>	<p><b>Quilt Making</b> 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.</p>

<p><b>Year 6</b></p>	<p><b>Mayan Clay masks</b>  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.  Critique, evaluate and test their ideas and products and the work of others.</p>	<p><b>Pizzas</b>  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.  Critique, evaluate and test their ideas and products and the work of others  Understand and apply the principles of nutrition and learn how to cook.  Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p>	<p><b>Fairgrounds</b>  Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world  Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users  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  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.  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]</p>
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