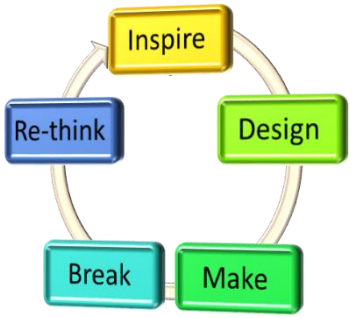
# Our Curriculum – Design and Technology

"Live life in all its Fullness"

Design and Technology – As designers at Leverton Church of England Academy, we acquire our knowledge and skills by following our Design Wheel. Through each stage of our Design and Technology process we encourage our children to take creative risks in designing and producing innovative ideas and prototypes using a range of tools, equipment and materials.




## Progression

| Concept | FS1 | FS2 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| **Design Inspiration** | | To explore different products | -To explore how products have been created. | -To explore objects and designs and identify likes and dislikes. | -To explore and generate ideas by identifying some of the great designers beginning to provide opinions on their designs. | -To independently generate ideas by identifying some of the great designers, giving reasons for their answers. | -To complete research using suggested designers and their ideas, confidently giving reasons for their answers. | -To independently research their own inspirational designers.<br>-To combine elements of design from a range of inspirational designers throughout History. |

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| **Technical Knowledge** | | To independently select and use the tools they require for the desired outcome<br><br>To know how to use one handed tools independently and safely<br><br>To know the names of tools they use (hole punch, stapler, scissors)<br><br>To know different ways to join materials (link with pins, tags, string, staple, glue)<br><br>To know different ways to manipulate paper/materials | -To use a range of tools from equipment provided.<br>-To know that structures that be made stronger.<br>-To explore how mechanisms work (levers, sliders, wheels and axles).<br>-To know the basic principles of a healthy and varied diet.<br>-To know where food comes from.<br><br>To know hygiene rules when taking part in cooking/baking activities<br><br>To use tools safely with supervision (grater, safety knives, electric whisk, sieve)<br><br>To know the purpose of a range of cooking tools<br><br>To understand how to follow a simple recipe | -To independently use a range of tools from the equipment provided.<br>-To know that structures that be made stronger and provide examples of this stiffer and more stable.<br>-To explore and use mechanisms work (levers, sliders, wheels and axles).<br>-To know and use the basic principles of a healthy and varied diet to prepare dishes.<br>-To know where food comes from. | -With support, select from a range of tools and equipment.<br>-To know that reinforcement may be required to add stability to products.<br>-To begin to use a range of materials and components.<br>-To know and understand the Eat Well Plate and how this contributes to a healthy and varied diet which can be begin to be applied to prepare dishes.<br>-To know how a variety of ingredients are grown, reared, caught and processed. | -To independently select from a range of tools and equipment.<br>-To know that reinforcement is required to ensure products are stable and fit for purpose.<br>-To use a range of selected materials and components with increasing accuracy.<br>-To use a range of mechanical systems in their products that have been provided (for example: gears, pulleys, levers and linkages).<br>-To know and understand the Eat Well Plate and how this contributes to a healthy and varied diet, which can be applied in a dish.<br>-To know how a variety of ingredients are grown, reared, caught and processed. | -To select from a wide range of tools and equipment to perform practical tasks (such as cutting, shaping, joining and finishing) accurately.<br>-To know and use a wide range of materials and components, including materials, textiles and ingredients.<br>-To know how to stiffen, strengthen and reinforce more complex structures.<br>-To use mechanical systems in their products and select accordingly (for example, gears, pulleys, cams levers and linkages).<br>-To begin to use electrical systems in their products.<br>-With support, to know and apply the principles of a health and varied | -To independently select from a wide range of tools and equipment to perform practical tasks (such as cutting, shaping, joining and finishing) accurately.<br>-To know and use a wide range of materials and components, including construction materials, textiles and ingredients accordingly.<br>-To know how to stiffen, strengthen and reinforce, more complex structures independently.<br>-To know and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages) without support.<br>-To use electrical |

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| | | | | | | | diet to chosen dishes.<br>-To know and understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. | systems in products, (for example: series circuits incorporating switches, bulbs, buzzers and motors).<br>-To know and independently apply the principles of a health and varied diet throughout a range of dishes.<br>-To use knowledge of seasonality and where ingredients are grown to make decisions about ingredients and dishes. |
| **Design Process** | | To talk about the models, they have made<br>- To know hygiene rules when taking part in cooking /baking | -To design products that have a purpose.<br>-To make a product.<br>-To know that software can help in the design stage.<br>-To know that some designs require improvements.<br>-To begin to evaluate their | -To design products that have a clear purpose.<br>-To make a product recognising changes they may need to make throughout the processes.<br>-To know how to use basic software in the design stage. | -To design with purpose, beginning to identify opportunities for design.<br>-To begin to refine made product throughout the make stage of the design wheel.<br>-To know how and when to use | - To design with purpose, beginning to identify opportunities for design.<br>-To refine work and techniques during the make stage of the design wheel.<br>-To select which software to use | -To design with the user in mind.<br>-To make a product that requires prototypes.<br>-To know that computer aided designs can design products.<br>-To know that products require a high quality | -To design with the user in mind, motivated by the service a product will offer.<br>-To make a product using a range of prototypes, making continual refinements.<br>-To use computer aided designs to |

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| | | activities<br>To use tools safely with supervision (grater, safety knives, electric whisk, sieve)<br><br>To know the purpose of a range of cooking tools<br><br>To understand how to follow a simple recipe | products against a design criteria. | -To evaluate their product against a design criteria. | software in the design stage.<br>-With support, evaluate and analyse their product against their design. | during the design stage.<br>-To know how to evaluate and analyse their product against their design. | finish, using art skills where required.<br>-With support, evaluate and analyse their products against their design idea, | represent designs.<br>-To ensure products have a high quality finish and have used a range of art skills to support this high quality finish.<br>-To independently evaluate and analyse their products against their own design idea with the views to improve their work. |