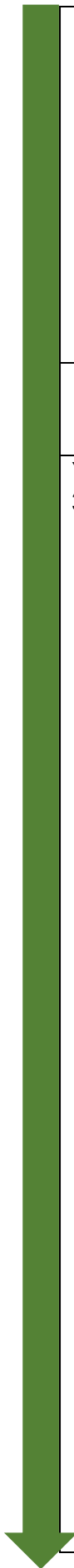


SKILLS AND KNOWLEDGE PROGRESSION IN Design Technology

	Design	Make	Evaluate	Technical knowledge	Cooking & Nutrition	Study of an artist
Year 1	<p>Understand To understand contexts, users and purposes.</p> <p>To work confidently within a range of contexts such as: imaginary, story-based, school and home.</p> <p>To state what products they are making.</p> <p>To say who the product is for.</p> <p>To state the purpose of the product.</p> <p>To briefly explain how the product will work.</p> <p>To use a simple design criteria to help develop their ideas</p> <p>Generate To generate, develop, model and communicate ideas.</p> <p>To use personal experiences to create own ideas.</p> <p>To use knowledge of existing products to help come up with ideas.</p> <p>To use talk and mark making to communicate ideas.</p>	<p>Planning To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>To make suggestions on what to do next.</p> <p>To select from a range of tools and equipment, explaining their choice.</p> <p>Practical skills & techniques To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>To follow simple health and safety procedures.</p> <p>To use a range of materials and components (including construction materials and kits, textiles and food ingredients).</p> <p>To assemble, join and combine materials and components</p>	<p>Own ideas/products To explore and evaluate a range of existing products</p> <p>To able able to talk about their design ideas and what they are making</p> <p>To make simple judgements about their products and ideas against a design criteria</p> <p>Existing products To evaluate their ideas and products against design criteria</p> <p>To explore what they like or dislike about a product</p> <p>To explore what products are and who or what they are made for</p>	<p>Making products work Build structures, exploring how they can be made stronger, stiffer and more stable</p> <p>To understand that a 3D textiles product can be assembled from two identical fabric shapes</p> <p>To know about the simple working characteristics of materials and components</p>	<p>Where food comes from</p> <p>To understand that all food comes from plants or animals</p> <p>Food preparation, cooking and nutrition</p> <p>To know that everyone should eat at least 5 portions of fruit and vegetables every day</p> <p>To explain how to prepare simple dishes safely, without using a heat source</p> <p>To use techniques such as cutting, peeling, mixing and grating with close supervision</p>	<p>About the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.</p> <p>Historic:</p> <p>Modern: Technology Tom: Kiddy Cook</p>
Year 2	<p>Understand To understand contexts, users and purposes.</p> <p>To work confidently within a range of contexts such as: gardens, playgrounds, local community, industry and the wider environment</p> <p>To explain what products they are making and how they will work</p> <p>To explain the purpose of the product.</p> <p>To discuss how they will make their products suitable for the intended user.</p> <p>To use a simple design criteria to help develop their ideas – describe design using pictures and diagrams</p>	<p>Planning To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>To select from a range of tools and equipment, explaining their choice.</p> <p>To select from a range of materials and components according to their characteristics</p> <p>Practical skills & techniques To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p>	<p>Own ideas/products To explore and evaluate a range of existing products</p> <p>To able to talk about their design ideas, what they are making and why</p> <p>To make simple judgements about their products and ideas against a design criteria</p> <p>To suggest how their product could be changed/improved</p> <p>Existing products To evaluate their ideas and products against design criteria</p>	<p>To explore and use mechanisms (eg: levers, sliders, wheels and axles) in their products</p> <p>To Build structures, exploring how they can be made stronger, stiffer and more stable</p> <p>To explain how food ingredients are combined according to their sensory characteristic</p>	<p>Where food comes from</p> <p>To understand that food has to be farmed, grown elsewhere or caught</p> <p>Food preparation, cooking and nutrition</p> <p>To sort foods into the five groups in The Eatwell Plate</p> <p>To know how to prepare simple dishes safely and hygienically, without using a heat source</p> <p>To be able to use techniques such as cutting, peeling and grating with care</p>	<p>Historic:</p> <p>Modern: Technology Tom: Basic vehicles/ moving creatures and scenes</p> <p>Kiddy Cook</p>

	<p>Generate To generate, develop, model and communicate ideas.</p> <p>To use knowledge of existing products to come up with their ideas</p> <p>To model ideas by exploring materials, components and construction kits and by making templates and mock ups</p> <p>To use IT, where appropriate to develop and communicate their ideas</p>	<p>To use a range of materials and components (including construction materials and kits, textiles, food ingredients and mechanical components)</p> <p>To measure, mark out, cut and shape materials and components</p> <p>To follow procedures for safety and hygiene</p>	<p>To explore how products work and how or where they might be used</p> <p>To explain what materials products are made from and why</p>			
	Design	Make	Evaluate	Technical knowledge	Cooking & Nutrition	Study of an artist
Year 3	<p>Understand To understand contexts, users and purposes.</p> <p>To work confidently within a range of contexts such as home, school and leisure</p> <p>To describe the purpose of their products</p> <p>To highlight key design features of their products that will appear to the intended users</p> <p>To briefly outline how particular parts of their products work</p> <p>To conduct a simple survey from the target audience to highlight needs and wants from the product</p> <p>To develop own design criteria to use these to inform their ideas – describe using pictures and written description.</p> <p>Generate To generate, develop, model and communicate ideas.</p> <p>To share and clarify ideas through discussion.</p> <p>To model ideas using prototypes.</p> <p>To use annotated sketches to develop and communicate ideas.</p> <p>To create realistic ideas focused on the needs of the user.</p> <p>To consider the availability of resources when designing products.</p>	<p>Planning To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.</p> <p>To select tools and equipment suitable for the task.</p> <p>To explain the choice of tools and equipment in relation to the skills and techniques they will be using.</p> <p>To order the main stages of making.</p> <p>Practical skills and techniques To 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.</p> <p>To follow procedures for safety and hygiene</p> <p>To use a wider range of materials and components than KS1 including construction</p>	<p>Evaluating To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>To identify the strengths and areas for development in their ideas and products</p> <p>To refer to their design criteria as they design and make</p> <p>To use their design criteria to evaluate their completed products</p> <p>Evaluating To investigate and analyse a range of existing products</p> <p>To know how and why materials have been chosen</p> <p>To know what methods of construction have been used</p> <p>To understand how well products meet user needs and wants</p> <p>To understand where and when products were designed and made</p> <p>Evaluating To understand how key events and individuals in design and technology have helped shape the world.</p> <p>To talk about inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products</p>	<p>Making products work</p> <p>To know how to use learning from science and maths to help design and make products that work</p> <p>To understand that materials have both functional properties and aesthetic qualities</p> <p>To know that materials can be combined and mixed to create more useful characteristics</p> <p>To develop an understanding that mechanical and electrical systems have an input, process and output</p> <p>To explain how simple electrical circuits and components can be used to create functional products</p> <p>To know how to make strong, stiff shell structures</p>		<p>Historic:</p> <p>Modern: Technology Tom: The Colosseum</p> <p>Discovery museum – Ships and ship building</p> <p>Kiddy Cook</p>



	Design	Make	Evaluate	Technical knowledge	Cooking & Nutrition	Study of an artist
Year 4	<p>Understand To understand contexts, users and purposes.</p> <p>To work confidently within a range of contexts such as culture, enterprise, industry and the wider environment.</p> <p>To indicate design features of their products that will appear to the intended users.</p> <p>To explain how particular parts of their product work.</p> <p>To gather information from the target audience to highlight needs and wants from the product.</p> <p>To develop own design criteria to use these to inform their ideas – describe using pictures and written description.</p> <p>Generate To generate, develop, model and communicate ideas.</p> <p>To model ideas using prototypes and pattern pieces. To use cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</p> <p>To use computer aided design to develop and communicate their ideas.</p> <p>To consider the availability of resources, then needs of the user and generate realistic ideas when making design decisions.</p>	<p>Planning To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.</p> <p>To select materials and components suitable for the task</p> <p>To explain their choice of materials and components according to functional properties and aesthetic qualities</p> <p>To order and discuss the stages of making</p> <p>Practical skills and techniques To 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.</p> <p>To follow procedures for safety and hygiene</p> <p>To use a wider range of materials and components than KS1 including construction</p>	<p>Evaluating To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>To consider the views of others, including intended users, to improve their work</p> <p>To refer to their design criteria as they design and make</p> <p>To use their design criteria to evaluate their completed products</p> <p>Evaluating To investigate and analyse a range of existing products</p> <p>How well products have been designed and made</p> <p>How well products work to achieve their purposes</p> <p>How well products meet user needs and wants</p> <p>To say whether products can be recycled or reused</p> <p>Evaluating To understand how key events and individuals in design and technology have helped shape the world.</p> <p>To explain and discuss about inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products</p>	<p>Making products work</p> <p>To know how to use learning from science and maths to help design and make products that work</p> <p>To know how to program a computer to control their products</p> <p>To make strong, stiff shell structures</p> <p>To understand that a single fabric shape can be used to make a 3D textiles product</p> <p>To explain how mechanical systems such as levers and linkages or pneumatic systems create movement</p> <p>To understand that food ingredients can be fresh, pre-cooked and processed</p>	<p>Where food comes from</p> <p>To know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world</p> <p>Food preparation</p> <p>To know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source</p> <p>To use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p> <p>To understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate</p> <p>To express that to be active and healthy, food and drink are needed to provide energy for the body</p>	<p>Historic:</p> <p>Modern: Technology Tom:</p> <p>Boats</p> <p>Discovery museum – bridges</p> <p>Kiddy Cook</p>
Year 5	<p>Understand To understand contexts, users and purposes.</p> <p>To work confidently within a range of contexts, such as the home, school and leisure</p> <p>To describe the purpose of their products</p> <p>To indicate the design features of their products that will appeal to intended user</p> <p>To explain how particular parts of their products work</p>	<p>Planning To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.</p> <p>To select tools and equipment suitable for the task</p> <p>To explain their choice of tools and equipment in relation to the skills and techniques they will be using</p> <p>To select materials and components suitable for the task</p>	<p>Evaluating To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>To identify the strengths and areas for development in their ideas and products</p> <p>To consider the views of others, including intended users, to improve their work</p> <p>To critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</p>	<p>Making products work</p> <p>how to use learning from science and maths to help design and make products that work</p> <p>that materials have both functional properties and aesthetic qualities</p> <p>that materials can be combined and mixed to create more useful characteristics</p> <p>that mechanical and electrical systems have an input, process and output</p>	<p>Where food comes from</p> <p>that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world</p> <p>that seasons may affect the food available</p> <p>how food is processed into ingredients that can be eaten or used in cooking</p>	<p>Historic: Joseph Swan</p> <p>DeGroote</p> <p>Babbage</p> <p>Modern: Discovery Museum</p> <p>Kiddy Cook</p>

	<p>To carry out research, using interviews and questionnaires.</p> <p>To identify the needs, wants, preferences and values of particular individuals and groups</p> <p>To develop a simple design specification to guide their thinking</p> <p>Generate To generate, develop, model and communicate ideas.</p> <p>To share and clarify ideas through discussion</p> <p>To model their ideas using prototypes and pattern pieces</p> <p>To use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas</p> <p>To use computer-aided design to develop and communicate their ideas</p> <p>To generate realistic ideas, focusing on the needs of the user</p> <p>To make design decisions that take account of the availability of resources</p>	<p>To explain their choice of materials and components according to functional properties and aesthetic qualities</p> <p>To produce appropriate lists of tools, equipment and materials that they need</p> <p>To formulate step-by-step plans as a guide to making</p> <p>Practical skills and techniques To 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.</p> <p>To follow procedures for safety and hygiene</p> <p>To use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components</p> <p>To accurately measure, mark out, cut and shape materials and components</p> <p>To accurately assemble, join and combine materials and components</p> <p>To accurately apply some finishing techniques, including those from art and design</p> <p>To use techniques that involve a number of steps</p> <p>To demonstrate resourcefulness when tackling practical problems</p>	<p>To evaluate their ideas and products against their original design specification</p> <p>Evaluating To investigate and analyse a range of existing products.</p> <p>how well products have been designed and made</p> <p>why materials have been chosen</p> <p>what methods of construction have been used</p> <p>how well products work to achieve their purposes</p> <p>how well products meet user needs and wants</p> <p>how much products cost to make</p> <p>how innovative products are</p> <p>how sustainable the materials in products are</p> <p>what impact products have beyond their intended purpose</p> <p>Evaluating To understand how key events and individuals in design and technology have helped shape the world.</p> <p>about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</p>	<p>how more complex electrical circuits and components can be used to create functional products</p> <p>how to program a computer to monitor changes in the environment and control their products</p> <p>how to reinforce and strengthen a 3D framework</p> <p>that a 3D textiles product can be made from a combination of fabric shapes</p> <p>To know that a recipe can be adapted by adding or substituting one or more ingredients</p>	<p>Food preparation</p> <p>To prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source</p> <p>To use a range of techniques such as peeling, chopping, slicing, grating, mixing spreading, kneading and baking</p> <p>To know that recipes can be adapted to change the appearance, taste, texture and aroma</p> <p>To know different food and drink contain different substances – nutrients, water and fibre – that are needed for health</p>	
<p>Year 6</p>	<p>Understand To understand contexts, users and purposes.</p> <p>To work confidently within a range of contexts, such as culture, enterprise, industry and the wider environment.</p> <p>To explain the purpose of their product.</p> <p>To explain the design features of their products that will appeal to intended user.</p> <p>To explain how particular parts of their products work.</p> <p>To carry out research, using surveys and web based resources.</p> <p>To identify the needs, wants, preferences and values of particular individuals and groups</p>	<p>Planning To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.</p> <p>To follow procedures for safety and hygiene</p> <p>To use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components.</p> <p>To use accurate measurements to assemble, join and combine materials and components.</p> <p>To formulate step by step plans as a guide to making.</p>	<p>Evaluating To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>To explain the strengths and areas for development in their ideas and products.</p> <p>To critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.</p> <p>To evaluate their ideas and products against their original design specification.</p> <p>Evaluating To investigate and analyse a range of existing products</p> <p>To investigate and analyse how innovative products are.</p>	<p>Making products work</p> <p>how to use learning from science and maths to help design and make products that work</p> <p>how mechanical systems such as cams or pulleys or gears create movement</p> <p>how to program a computer to monitor changes in the environment and control their products</p> <p>how more complex electrical circuits and components can be used to create functional products</p> <p>To know that a recipe can be adapted by adding or substituting one or more ingredients</p>	<p>Where food comes from</p> <p>To know that that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world</p> <p>To know that seasons may effect the food available.</p> <p>To know that food is processed into ingredients that can be eaten or used in cooking.</p> <p>Food preparation, cooking and nutrition</p> <p>To prepare and cook a variety of predominantly savoury dishes safely and hygienically including,</p>	<p>Artist: Historic</p> <p>Sir Isaac Newton</p> <p>DeGroot</p> <p>Babbage</p> <p>Modern: Technology Tom: WW1 and WW2 structures and scenes Anderson shelters Motorised battle tanks</p> <p>Nissan</p> <p>Kiddy Cook</p>

<p>To develop a design specification to guide their thinking.</p> <p>Generate To generate, develop, model and communicate ideas.</p> <p>To share and clarify ideas through discussion.</p> <p>To model and develop their ideas using prototypes and pattern pieces.</p> <p>To use annotated sketches, cross-sectional drawings and exploded diagrams to support and explain their ideas.</p> <p>To use computer-aided design to develop and communicate their ideas</p> <p>To use realistic ideas, focused on the needs of the user -</p> <p>To make design decisions that take account of the availability of resources</p>	<p>Practical skills and techniques To 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.</p> <p>To demonstrate resourcefulness when tackling practical problems.</p> <p>To use techniques that involve several numbers of steps.</p> <p>To accurately apply a range finishing techniques, including those from art and design.</p>	<p>To analyse how sustainable to materials in products are.</p> <p>To investigate the impact products have beyond their intended purpose.</p> <p>Evaluating To understand how key events and individuals in design and technology have helped shape the world.</p> <p>To know about inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products.</p>		<p>where appropriate, the use of a heat source</p> <p>To use a range of techniques such as peeling, chopping, slicing, grating, mixing spreading, kneading and baking.</p> <p>To know that recipes can be adapted to change the appearance, taste, texture and aroma</p> <p>To know different food and drink contain different substances – nutrients, water and fibre – that are needed for health</p>	
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EYFS

Exploring and using media and materials

30-50 months

- Explores colour and how colours can be changed.
- Understands that they can use lines to enclose a space, and then begin to use these shapes to represent objects.
- Beginning to be interested in and describe the texture of things.
- Uses various construction materials.
- Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces.
- Joins construction pieces together to build and balance.
- Realises tools can be used for a purpose.

40-60 months

- Explores what happens when they mix colours.
- Experiments to create different textures.
- Constructs with a purpose in mind, using a variety of resources.
- Uses simple tools and techniques competently and appropriately.
- Selects appropriate resources and adapts work where necessary.
- Selects tools and techniques needed to shape, assemble and join materials they are using.

Being Imaginative

30-50 months

- Uses available resources to create props to support role-play.
- Captures experiences and responses with a range of media, such as music, dance and paint and other materials or words.

40-60 months

- Chooses particular colours to use for a purpose.