



Holy Trinity
C of E (VC)
Primary School
Halstead

Design & Technology PROGRESSION MAP

January 2022

www.holytrinityhalstead.com



Explore: D&T. Revised: January 2022

EYFS

Wondering about winter. Where does it all begin?

Physical development.

3&4 year olds will be learning to....

Use one handed tools and equipment, for example, making snips in paper with scissors

Children in Reception will be learning to...

-Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools; pencils, paintbrushes, scissors, cutlery

-Know and talk about the different factors that support their overall health and wellbeing: regular physical activity, health eating, toothbrushing, screen time, sleep and safe pedestrian

Fine Motor Skills ELG

-Children at the expected level of development will:

- Use a range of small tools, including scissors, paint brushes and cutlery;

Creating with Materials ELG

Children at the expected level of development will:

- Safely use and explore a variety of materials, tools and techniques
- Share their creations, explaining the process they have used;

Managing Self ELG

Children at the expected level of development will:

- Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices.

Year 1	Year 2
Where in the world are we?	Is it a small world?
<p>Design - NC 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</p>	
<ul style="list-style-type: none"> • Design purposeful, functional products for themselves and other users based on design criteria • I can create a simple design for my product • I can use pictures and words to describe what I want to do 	<ul style="list-style-type: none"> • Design purposeful, functional 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 • I can design useful, pleasing products for myself and other users based on a design brief. • I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT.
<p>Make - NC 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</p>	
<ul style="list-style-type: none"> • 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 • I can select from and use a range of tools and equipment to perform practical tasks eg: cutting, shaping, joining and finishing • I can use a range of simple tools to cut, join and combine materials and components safely 	<ul style="list-style-type: none"> • 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 • I can choose tools I would like to use and select materials based on my knowledge of their properties. • I can safely measure, mark out and cut and shape materials and components using a range of tools.
<p>Evaluate NC Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria</p>	
<ul style="list-style-type: none"> • Explore and evaluate a range of existing products • I can ask simple questions about existing products and those that I have made 	<ul style="list-style-type: none"> • Explore and evaluate a range of existing products • Evaluate their ideas and products against design criteria • I can evaluate and assess existing products and those that I have made using a design criteria.
<p>Technical Knowledge NC 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.</p>	

- Build structures, exploring how they can be made stronger, stiffer and more stable
- I can investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable
- I can build structures, exploring how they can be made stronger, stiffer and more stable

- 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.
- I can explore and use mechanisms such as levers, sliders, wheels and axles in products.
- I can use wheels and axles in a product.

Cooking and Nutrition - NC Objectives

Use the basic principles of a healthy and varied diet to prepare dishes

Understand where food comes from.

Cooking and nutrition

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.
- I can talk about what I eat at home and begin to discuss what healthy foods are
- I can say where some food comes from and give examples of food that is grown
- I can use simple tools with help to prepare food safely
- I can use a wider range of cookery techniques to prepare food safely. (covered in CREATE)

Cooking and nutrition

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.
- I can understand the need for a variety of food in a diet. (covered in Science)
- I can understand that all food has to be farmed, grown or caught. (covered in science)
- I can use a wider range of cookery techniques to prepare food safely. (covered in CREATE)

Revised: January 2022

Year 3	Year 4	Year 5	Year 6
<p>What makes a community? Menu for family and friends</p>	<p>How is the world changing? Food sources and seasonality</p>	<p>Would the world be better off without us? Houses on Stilts</p>	<p>What makes strength? Bridges</p>
<p><u>Design- NC Objectives</u> 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.</p>			
<ul style="list-style-type: none"> Use research and develop design criteria to inform the design of an appealing product aimed at particular individuals or groups. Generate, develop, model and communicate their ideas through discussion, annotated sketches, Research other's needs. Design has a purpose and meets requirements / brief. Follow the given design criteria. Created a detailed plan to show order, equipment and materials (ingredients) needed Use sketches / labeled drawings to ro describe design 	<ul style="list-style-type: none"> 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, computer-aided design. Researches design ideas. Design meets a range of needs and meet design brief. Use the internet to research ideas Can suggest improvements for the design. Produce a detailed plan and explain it to others. Make an annotated sketch. Make and explain design decisions. Explain how product will work. 	<ul style="list-style-type: none"> 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, prototypes, pattern pieces and computer-aided design. Use internet and questionnaires to research design ideas. Begin to consider needs and wants of individuals/ groups so the design is fit for purpose. Create own design criteria. Have a range of ideas. Produce a plan and explain it others. Make design decisions considering time and resources. Annotated detailed sketches. Clearly explain how parts of the product will work. Model and refine designs. 	<ul style="list-style-type: none"> 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. Continue to draw on research to inform design process. Create design features that appeal to target user. Create own design criteria. Come up with creative and innovative ideas. Produce a plan and explain it others. Make design decisions considering time and resources and cost. Annotated detailed sketches with cross sectional planning. • Clearly explain how parts of the product will work. Model and refine designs. Use computer aided design programs.
<p><u>Make- NC Objectives</u> 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.</p>			
<ul style="list-style-type: none"> Select from and use a 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 ingredients, according to their functional properties. Begin to use tools selected suitably accurately, explaining choices. 	<ul style="list-style-type: none"> 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, ingredients, according to their functional properties and aesthetic qualities. Select tools that are suitable and explain choices. 	<ul style="list-style-type: none"> 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, according to their functional properties and aesthetic qualities. Start to use tools with a good level of precision. Explain choices whilst considering how 	<ul style="list-style-type: none"> 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, according to their functional properties and aesthetic qualities. Use selected tools and equipment precisely. Explain choices whilst considering how

<ul style="list-style-type: none"> Choose materials that are fit for purpose. Work through plan in correct order. Measure (quantities) carefully to avoid mistakes Evaluate how good the product might be. 	<ul style="list-style-type: none"> Select materials that are fit for purpose and explain choices. Work through plan in order. Realise if a product will be good quality Measure (quantities) accurately to avoid mistakes 	<p>functional it will be.</p> <ul style="list-style-type: none"> Make and follow a detailed step by step plan. Explain the appeal of the product Measure, mark out and cut independently mainly accurately. Start to put together materials mainly accurately. Use techniques that involve steps Begin to problem solve when it arises. 	<p>functional it will be as well as considering the aesthetics.</p> <ul style="list-style-type: none"> Create and follow and adapt a detailed step by step plan. Explain products appeal to audience, including changes to quality. Measure, mark out and cut independently accurately. Put together materials accurately. Use techniques that involve a number of steps. Creatively problem solve when it arises.
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Evaluate- NC Objectives
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

<ul style="list-style-type: none"> Investigate and analyse a range of existing products Understand how key individuals in design and technology have helped shape the world Use design criteria whilst designing and making. Use design criteria to evaluate final product. What would you change to make it better? Evaluate existing products – how well have they been made, fit for purpose etc. Learn about some inventors chefs (which chefs / inventors?) 	<ul style="list-style-type: none"> 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 Use design criteria to evaluate final product. Explain how to improve original design. Evaluate existing products – how well have they been made, fit for purpose etc. Start to understand who, where, and when products were designed. Know about some inventors / chefs of groundbreaking products (which chefs / inventors) 	<ul style="list-style-type: none"> 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 Evaluate quality of design whilst designing and making. Evaluate ideas and finished product against specs, thinking about appearance and purpose. Test and evaluate final product. Evaluate existing products – how well have they been made, fit for purpose etc. • Talk about some inventors/designers/engineers of ground-breaking products (which inventors engineers) 	<p>Understand how key events and individuals in design and technology have helped shape the world</p> <ul style="list-style-type: none"> Evaluate quality of design whilst designing and making – is it fit for purpose? Check constantly the design is the best it can be. Evaluate ideas and finished product against specs, is it fit for purpose? Test and evaluate final product – what could we improve if we had different resources? Thoroughly evaluate existing products – how well have they been made, fit for purpose etc. Research how sustainable the materials used are. Think about the impact of the products beyond their purpose. Discuss some inventors/designers/engineers of ground-breaking products.(which inventors engineers)
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Technical Knowledge - NC Objectives
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.

		<ul style="list-style-type: none"> • 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. • Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. • Strengthen frames using diagonal struts. • Use technical knowledge and accurate skills to problem solve during the making process. • Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. 	<ul style="list-style-type: none"> • 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 • To use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made.
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Cooking and Nutrition - NC Objectives

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>Cooking and Nutrition</p> <ul style="list-style-type: none"> • 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. • Talk about different food groups and name food from each group. • Use a wider variety of ingredients to prepare and combine ingredients safely. • Understand what makes a healthy and balanced diet, and that different food and drinks provide different substances the body needs to be healthy and active. • Read and follow recipes which involve several processes, skills and techniques. 	<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> • 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. • Understand that food has to be grown, framed or caught in Europe and the wider world. • Understand the seasonality of eating seasonal and locally produced food. • Select appropriate ingredients and use a wide range of techniques to combine them. • Research, plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills. • Understand the main food groups and the different nutrients that are important for health. 	<p>Cooking and Nutrition</p>	<p>Cooking and Nutrition</p>
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	<ul style="list-style-type: none">• Use information on food labels to inform choices.		
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