



Totternhoe CE Academy – Design and Technology Curriculum Progression



Year 1

<p><u>Developing, Planning and Communicating Ideas</u></p>	<p>Begin to draw on their own experience to help generate ideas. Begin to understand what products are for, how they work and what materials have been used. Start to suggest ideas and explain what they are going to do. Understand how to produce an item for a target group based on a design criterion. Begin to develop their ideas through talk, drawings, templates and mock ups of their ideas.</p>
<p><u>Tools and Equipment</u></p>	<p>Begin to make their design using appropriate techniques. Begin to build structures, exploring how they can be made stronger, stiffer, more stable etc. Explore and use mechanisms e.g. levers, sliders, wheels etc. With support: measure, mark and cut out a range of materials. Explore using tools safely e.g. scissors. Begin to assemble, join and combine materials and components together using a variety of methods e.g. glues or tapes. Begin to use simple finishing techniques to improve the appearance of their product.</p>
<p><u>Evaluating</u></p>	<p>Start to evaluate their product by discussing how well it works in relation to its purpose. When looking at existing products, explain what they like and dislike about the products with reasons. Begin to evaluate their products as they are developed, identify strengths and changes they might make.</p>
<p><u>Food and Nutrition</u></p>	<p>Begin to understand that food comes from plants or animals. Understand that food has to be farmed, grown or caught. Be able to name and sort food. Begin to understand that everyone should eat at least five portions of vegetable every day. Know how to prepare simple dishes safely and hygienically. Know how to use techniques such as: cutting, peeling and grating.</p>



Totternhoe CE Academy – Design and Technology Curriculum Progression



Year 2

<p><u>Developing, Planning and Communicating Ideas</u></p>	<p>Start to generate ideas by drawing on their own and others experiences. Begin to develop their design ideas through discussion, observation, drawing and modelling. Identify a purpose for what they intend to design and make. Understand how to identify a target group for what they intend to design and make based on a design criterion. Develop their ideas through talk, drawings, labels, templates and mock ups.</p>
<p><u>Tools and Equipment</u></p>	<p>Begin to select tools and materials and use correct vocabulary to name and describe them. Build structures, exploring how they can be made stronger, stiffer, more stable etc. With support, measure, cut and score with some accuracy. Learn to use hand tools safely and appropriately. Start to assemble, join and combine materials in order to make a product. Demonstrate how to cut, shape and join fabric to make a simple product. Use simple sewing techniques. Start to choose and use appropriate finishing techniques based on their own ideas.</p>
<p><u>Evaluating</u></p>	<p>Evaluate their work against their design criteria. Look at a range of existing products, explain what they like and dislike about the products and why. Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. Confidently talk about their ideas, saying what they like and dislike about them.</p>
<p><u>Food and Nutrition</u></p>	<p>Understand that all food comes from plants or animals. Know that food has to be farmed, grown or caught. Understand how to name and sort foods into the five groups. Know that everyone should eat at least five portions of fruit and vegetables every day. Demonstrate how to prepare simple dishes safely and hygienically. Demonstrate how to use techniques such as cutting, peeling and grating.</p>



Totternhoe CE Academy – Design and Technology Curriculum Progression



Year 3

<p><u>Developing, Planning and Communicating Ideas</u></p>	<p>With growing confidence, generate ideas for an item, considering its purpose and the user/s. Start to order the main stages of making a product. Identify a purpose and establish criteria for a successful product. Understand how products have been designed, made, what materials have been used and construction techniques used. Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. Start to understand whether products can be recycled or reused. Understand that when designing, labelled drawings need to be created. When planning, explain their choice of materials and components including function and aesthetics.</p>
<p><u>Tools and Equipment</u></p>	<p>Select a wider range of tools and techniques for making a product. Explain their choice of tools and equipment in relation to the skills and techniques they will be using. Start to understand that mechanical and electrical systems have an input, process and output. Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement. Know how simple electrical circuits and components can be used to create functional products. Measure, mark out, cut, score and assemble components with increasing accuracy. Start to work safely and accurately with a range of simple tools. Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work/product. Start to measure, tape, pin, cut and join fabric with some accuracy.</p>
<p><u>Evaluating</u></p>	<p>Start to evaluate their product against the original design criteria e.g. how well it meets its intended purpose. Begin to disassemble and evaluate familiar products and consider the views of others to improve them. Evaluate the key designs of individuals in design and technology who have helped shape the world.</p>
<p><u>Food and Nutrition</u></p>	<p>Start to know that food is grown, reared and caught in the UK, Europe and the wider world. Understand how to prepare and cook a variety of dishes safely and hygienically including, and where appropriate, the use of a heat source. Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Start to understand that a healthy diet is made up from a variety and balance of different food and drink. Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.</p>



Totterhoe CE Academy – Design and Technology Curriculum Progression



Year 4

<p><u>Developing, Planning and Communicating Ideas</u></p>	<p>Start to generate ideas and consider the purposes for which they are designing. Confidently make labelled drawings from different views showing specific features. Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail. Identify the strengths and areas for development in their ideas and products. When planning, consider the views of others, including intended users, to improve their work. Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground -breaking products. When planning, explain their choice of materials and components according to function and aesthetic.</p>
<p><u>Tools and Equipment</u></p>	<p>Select a wider range of tools and techniques for making their product safely. Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. Start to join and combine materials and components accurately in temporary and permanent ways. Know how mechanical systems such as cams, pulleys or gears create movement. Understand how more complex electrical circuits and components can be used to create functional products. Understand how to reinforce and strengthen a 3D framework. Sew using a range of different stitches, to weave and knit. Demonstrate how to measure, tape, pin, cut and join fabric with some accuracy. Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</p>
<p><u>Evaluating</u></p>	<p>Evaluate their products carrying out appropriate tests. Start to evaluate their work both during and at the end of a project. Be able to disassemble and evaluate familiar products and consider the views of others to improve them. Evaluate the key designs of individuals in design and technology who have helped shape the world.</p>
<p><u>Food and Nutrition</u></p>	<p>Understand that food is grown, reared and caught in the UK, Europe and the wider world. Understand how to prepare and cook a variety of dishes safely and hygienically including, and where appropriate, the use of a heat source. Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Know that a healthy diet is made up from a variety and balance of different food and drink. Know that to be active and healthy, food and drink are needed to provide energy for the body.</p>



Totternhoe CE Academy – Design and Technology Curriculum Progression



Year 5

<p><u>Developing, Planning and Communicating Ideas</u></p>	<p>Start to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern pieces.</p> <p>Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.</p> <p>With growing confidence, apply a range of finishing techniques including those from art and design.</p> <p>Draw up a specification for their design - link to Maths and Science.</p> <p>Use results of investigations, information sources (including ICT) when developing design ideas.</p> <p>With growing confidence select appropriate materials, tools and techniques.</p> <p>Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.</p>
<p><u>Tools and Equipment</u></p>	<p>Select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing accurately.</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.</p> <p>Understand how mechanical systems such as cams, pulleys or gears create movement.</p> <p>Know how more complex electrical circuits and components can be used to create functional products.</p> <p>Understand that mechanical and electrical systems have an input, process and output.</p> <p>Begin to measure and mark out more accurately.</p> <p>Demonstrate how to use skills in using different tools and equipment safely and accurately with growing confidence.</p> <p>Cut and join with accuracy to ensure a good-quality finish to the product.</p> <p>Weigh and measure accurately e.g. time, dry ingredients, liquids.</p> <p>Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</p>
<p><u>Evaluating</u></p>	<p>Start to evaluate a product against the original design specification and by carrying out tests.</p> <p>Evaluate their work both during and at the end of a project.</p> <p>Begin to evaluate their product personally and seek evaluation from others.</p> <p>Evaluate the key designs of individuals in design and technology who have helped shape the world.</p>
<p><u>Food and Nutrition</u></p>	<p>Understand that food is grown, reared and caught in the UK, Europe and the wider world and give examples of these foods.</p> <p>Begin to understand that seasons may affect the food available.</p> <p>Understand how food is processed into ingredients that can be eaten or used in cooking.</p> <p>Know how to prepare and cook a variety of dishes safely and hygienically including and where appropriate, the use a heat source.</p> <p>Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Begin to understand that different food and drink contain different substances (nutrients, water and fibre) that are needed for health.</p>



Totternhoe CE Academy – Design and Technology Curriculum Progression



Year 6

<p><u>Developing, Planning and Communicating Ideas</u></p>	<p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern pieces.</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. Accurately apply a range of finishing techniques, including those from art and design.</p> <p>Draw up a specification for their design - link with Maths and Science.</p> <p>Plan the order of their work, choosing appropriate materials, tools and techniques.</p> <p>Suggest alternative methods of making if the first attempt fails.</p> <p>Identify the strengths and areas for development in their ideas and products.</p> <p>Know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.</p>
<p><u>Tools and Equipment</u></p>	<p>Confidently select appropriate tools, materials, components and techniques and use them.</p> <p>Use tools safely and accurately.</p> <p>Assemble components to make working models.</p> <p>Aim to make and to achieve a quality product.</p> <p>With confidence pin, sew and stitch materials together to create a product.</p> <p>Demonstrate when they make modifications as they go along.</p> <p>Construct products using permanent joining techniques.</p> <p>Understand how mechanical systems such as cams, pulleys or gears create movement.</p> <p>Know how more complex electrical circuits and components can be used to create functional products.</p> <p>Know how to reinforce and strengthen a 3D framework.</p> <p>Understand that mechanical and electrical systems have an input, process and output.</p> <p>Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</p>
<p><u>Evaluating</u></p>	<p>Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests.</p> <p>Evaluate their work both during and at the end of a project.</p> <p>Record their evaluations using drawings with labels.</p> <p>Evaluate against their original criteria and suggest ways that their product could be improved.</p> <p>Evaluate the key designs of individuals in design and technology who have helped shape the world.</p>
<p><u>Food and Nutrition</u></p>	<p>Know that food is grown, reared and caught in the UK, Europe and the wider world and give examples of these foods.</p> <p>Understand that seasons may affect the food available.</p> <p>Understand how food is processed into ingredients that can be eaten or used in cooking.</p> <p>Know how to prepare and cook a variety of dishes safely and hygienically including, and where appropriate, the use a heat source.</p> <p>Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Know different food and drink contain different substances (nutrients, water and fibre) that are needed for health.</p>



Totternhoe CE Academy – Design and Technology Curriculum Progression