



St. John's C of E Primary School Design & Technology Curriculum



Intent

At St. John's, our Design and Technology curriculum aims to inspire creativity, innovation, and resilience in our pupils, equipping them with the skills and confidence to design, make, and evaluate products that solve real-world problems. Rooted in our school's values, the curriculum encourages pupils to think critically, act resourcefully, and work collaboratively while developing a strong understanding of the impact of design and technology on their lives and the wider world.

Through engaging and practical learning experiences, we will:

- **Develop Practical Skills:** Teach pupils the essential techniques, tools, and processes needed to design and create high-quality products, ensuring progression in skill and understanding across year groups.
- **Encourage Creativity and Innovation:** Inspire pupils to generate imaginative ideas and develop functional, aesthetic, and sustainable solutions to real-world challenges.
- **Promote Critical Thinking and Problem-Solving:** Support pupils in identifying user needs, planning thoughtfully, and evaluating their designs, fostering resilience, adaptability, and reflective thinking.
- **Make Cross-Curricular Connections:** Enable pupils to apply their learning from subjects such as mathematics, science, and art to deepen their understanding and enrich their design work.
- **Inspire Environmental Responsibility:** Encourage pupils to consider the impact of materials, processes, and designs on the environment, promoting sustainability and responsible design choices.

We aim to empower pupils at St. John's to become resourceful, skilled, and creative individuals who are confident in their ability to contribute to an ever-changing world. Our curriculum fosters a sense of pride, curiosity, and purpose, preparing pupils for future learning and inspiring them to use their skills to make a positive difference in their communities and beyond.

Implementation

EYFS and Primary Curriculum

Year	Autumn	Spring	Summer
EYFS	Food – Tasting, Preferences, Harvest	Mechanisms - Levers and Linkages (Moving Creature – Split Pins)	Structures – Junk Modelling (habitats)
1	Textiles (e.g. Puppet)	Mechanisms – Wheels and Axles	



St. John's C of E Primary School Design & Technology Curriculum



2	Structures (e.g. Castle)	Mechanisms – Sliders and Levers	Food (e.g. Preparation of Fruit and Vegetables)
3		Mechanical Systems (e.g. Greeting Card)	Food (e.g. Sandwich)
4	Textiles (e.g. Wallet)	Electrical Systems (e.g. Night Light)	Structures (e.g. Gift Box)
5	Mechanical Systems – Pulleys or Gears	Food (e.g. Hot Cross Buns)	Structures (e.g. Sukkah or Greek Temple)
6		Electrical Systems	Textiles (e.g. School Mascot)
Link to Planning	https://stjohnsdanburysexsch.sharepoint.com/:f/s/CURRICULUM/EpVL3cdMrZBFqD64fMyUImQB_7KGn9nOFjKRQm87KsJl1A?e=OLVVMj		

Curriculum – Knowledge and Skills

SKILLS	EYFS	Year 1	Year 2
Developing, planning and communicating ideas	<p>Explain what they are making and which materials they are using.</p> <p>Select materials from a limited range that will meet a simple design criteria e.g. shiny.</p> <p>Select and name the tools needed to work the materials e.g. scissors for paper.</p> <p>Explore ideas by rearranging materials.</p>	<p>Begin to draw on their own experience to help generate ideas and research conducted on criteria. Begin to understand the development of existing products: What they are for, how they work, materials used. Start to suggest ideas and explain what they are going to do.</p> <p>Understand how to identify a target group for what they intend to design and make based on a design criteria.</p>	<p>Start to generate their own ideas by drawing on their own and other people's experiences.</p> <p>Begin to develop their design ideas through discussion, observation, drawing and modelling.</p> <p>Identify a purpose for what they intend to design and make.</p>



St. John's C of E Primary School Design & Technology Curriculum



	<p>Describe simple models or drawings of ideas and intentions.</p> <p>Discuss their work as it progresses.</p>	<p>Begin to develop their ideas through talk and drawings. Make templates and mock ups of their ideas in card and paper or using ICT.</p>	<p>Understand how to identify a target group for what they intend to design and make based on a design criteria.</p> <p>Develop their ideas through talk and drawings and label parts. Make templates and mock ups of their ideas in card and paper or using ICT.</p>
<p>Working with tools, equipment, materials and components to make quality products</p>	<p>Begin to create their design using basic techniques.</p> <p>Start to build structures, joining components together.</p> <p>Look at simple hinges, wheels and axles. Use technical vocabulary when appropriate.</p> <p>Begin to use scissors to cut straight and curved edges and hole punches to punch holes.</p> <p>Explore using/ holding basic tools such as a saw or hammer.</p> <p>Use adhesives to join material.</p>	<p>Make their design using appropriate techniques. With help measure, mark out, cut and shape a range of materials</p> <p>Use tools <i>eg scissors and a hole punch</i> safely. Assemble, join and combine materials and components together using a variety of temporary methods e.g. Glues or masking tape.</p> <p>Use simple finishing techniques to improve the appearance of their product</p>	<p>Begin to select tools and materials; use correct vocabulary to name and describe them.</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>With help 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 basic sewing techniques.</p> <p>Start to choose and use appropriate finishing techniques based on own ideas.</p>
<p>Food and Nutrition</p>	<p>Begin to develop a food vocabulary using taste, smell, texture and feel.</p> <p>Explore familiar food products e.g. fruit and vegetables.</p>	<p>Begin to understand that all food comes from plants or animals. Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught.</p>	<p>Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>Demonstrate how to use techniques such as cutting, peeling and grating.</p>



St. John's C of E Primary School Design & Technology Curriculum



	<p>Stir, spread, knead and shape a range of food and ingredients.</p> <p>Begin to work safely and hygienically.</p> <p>Start to think about the need for a variety of foods in a diet.</p> <p>Measure and weigh food items, non statutory measures e.g. spoons, cups.</p>	<p>Know how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>Know how to use techniques such as cutting, peeling and grating.</p>	
Evaluating processes and product	<p>Say what they like and do not like about items they have made and attempt to say why. Begin to talk about their designs as they develop and identify good and bad points. Start to talk about changes made during the making process.</p> <p>Discuss how closely their finished products meet their design criteria</p>	<p>Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). When looking at existing products explain what they like and dislike about Products and why. Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.</p>	<p>Evaluate their work against their design criteria. Look at a range of existing products explain what they like and dislike about Products and why. Start to evaluate their products as they are developed, identifying strengths and possible changes they might make.</p> <p>With confidence talk about their ideas, saying what they like and dislike about them.</p>

SKILLS	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas	<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 well products have been designed, made, what materials</p>	<p>Start to generate ideas considering the purposes for which they are designing. Confidently make labelled drawings from different views showing specific features.</p> <p>Develop a clear idea of what has to be done, planning how to use materials, equipment and</p>	<p>Develop, model and communicate their ideas through discussion, annotated sketches, crosssectional and exploded diagrams, prototypes, pattern pieces and CAD.</p> <p>Begin to use research and develop design criteria to inform the design of innovative,</p>	<p>Generate, develop and model and communicate their ideas through discussion, annotated sketches, crosssectional and exploded diagrams, prototypes, pattern pieces and CAD. Use research and develop design criteria to inform the design of innovative, functional,</p>



St. John's C of E Primary School Design & Technology Curriculum



	<p>have been used and the construction technique.</p> <p>Start to understand whether products can be recycled or reused. Know to make drawings with labels when designing.</p> <p>When planning explain their choice of materials and components including function and aesthetics.</p>	<p>processes, and suggesting alternative methods of making, if the first attempts fail.</p> <p>Identify the strengths and areas for development in their ideas and products.</p> <p>When planning consider the views of others, including intended users, to improve their work.</p> <p>When planning explain their choice of materials and components according to function and aesthetic.</p>	<p>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 Use results of investigations, information sources, including ICT when developing design ideas. 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>appealing products that are fit for purpose.</p> <p>Accurately apply a range of finishing techniques, including those from art and design. Plan the order of their work, choosing appropriate materials, tools and techniques. Suggest alternative methods of making if the first attempts fail.</p> <p>Identify the strengths and areas for development in their ideas and products. Know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.</p>
<p>Working with tools, equipment, materials and components to make quality products</p>	<p>Select a wider range of tools.</p> <p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using.</p> <p>Start to understand that mechanical and electrical systems have an input, process and output.</p> <p>Start to work safely and accurately with a range of simple tools.</p>	<p>Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.</p> <p>Start to join and combine materials and components accurately in temporary and permanent ways.</p> <p>Know how mechanical systems such as cams or pulleys or gears create movement.</p>	<p>Select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing, accurately.</p> <p>Understand how mechanical systems such as cams or pulleys or gears create movement.</p> <p>Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the</p>	<p>Confidently select appropriate tools, materials, components and techniques and use them. Use tools safely and accurately.</p> <p>Assemble components to make working models. Aim to make and to achieve a quality product. Demonstrate when make modifications as they go along.</p> <p>Construct products using permanent joining techniques.</p> <p>Understand how mechanical systems such as cams or pulleys or</p>



St. John's C of E Primary School Design & Technology Curriculum



	<p>Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.</p> <p>Measure, mark out, cut, score and assemble components with more accuracy.</p> <p>Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work.</p>	<p>Understand how to reinforce and strengthen a 3D framework.</p>	<p>environment and control their products.</p> <p>Understand that mechanical and electrical systems have an input, process and output. Begin to measure and mark out more accurately.</p> <p>Demonstrate how to use skills in using different tools and equipment safely and accurately</p> <p>With growing confidence cut and join with accuracy to ensure a good-quality finish to the product</p>	<p>gears create movement. Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. 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>Food and Nutrition</p>	<p>Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, 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.</p>	<p>Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, 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.</p>	<p>Understand how food is processed into ingredients that can be eaten or used in cooking. Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Begin to understand that different food and drink contain different substances – nutrients,</p>	<p>Understand how food is processed into ingredients that can be eaten or used in cooking. Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Begin to understand that different food and drink contain different substances</p>



St. John's C of E Primary School Design & Technology Curriculum



			water and fibre – that are needed for health.	– nutrients, water and fibre – that are needed for health.
Evaluating processes and product	<p>Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose</p> <p>Begin to disassemble and evaluate familiar products and consider the views of others to improve them.</p> <p>Evaluate the key designs of individuals in design and technology has helped shape the world.</p>	<p>Evaluate their products carrying out appropriate tests. Start to their work both during and at the end of the assignment.</p> <p>Be able to disassemble and evaluate familiar products and consider the views of others to improve them.</p> <p>Evaluate the key designs of individuals in design and technology has helped shape the world.</p>	<p>Start to evaluate a product against the original design specification and by carrying out tests. Evaluate their work both during and at the end of the assignment. Begin to evaluate it personally and seek evaluation from others.</p> <p>Evaluate the key designs of individuals in design and technology has helped shape the world.</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 the assignment.</p> <p>Record their evaluations using drawings with labels. 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 has helped shape the world.</p>



St. John's C of E Primary School Design & Technology Curriculum



Impact

The impact of the Design and Technology curriculum at St. John's will be evident in the creativity, skills, and attitudes pupils develop as they progress through the school. By the time pupils leave St. John's, they will be confident, resourceful, and reflective learners, capable of using their knowledge and skills to solve real-world problems and create purposeful products.

Impact on Pupils

- **Practical Proficiency:** Pupils will have developed a wide range of practical skills, confidently using tools, materials, and techniques to design and make high-quality products.
- **Creative and Innovative Thinking:** Pupils will approach challenges with creativity and originality, generating and realising ideas that are functional, aesthetically pleasing, and sustainable.
- **Critical Thinking and Problem-Solving:** Pupils will be skilled in identifying user needs, planning effectively, and evaluating their designs, demonstrating resilience and adaptability in refining their work.
- **Cross-Curricular Application:** Pupils will confidently apply their knowledge from other subjects, such as mathematics, science, and art, enhancing their understanding and enriching their design processes.

Through our Design and Technology curriculum at St. John's, we aim to nurture pupils who are creative, resourceful, and reflective, ready to use their skills and knowledge to address challenges and contribute to a better, more sustainable world.

