



Design and Technology

Intent

Design Technology at St Mary's is about providing children with a wide range of learning opportunities to encourage enquiry and apply knowledge and skills to solve a practical problem. It is a purposeful activity in response to real needs and opportunities from recognisable situations. We support and enable our pupils in applying their knowledge and skills, to the best of their ability, to succeed in designing and making a good product using a range of materials and tools. We enable pupils to evaluate and improve their own products.

We provide cooking opportunities so that children can learn about healthy life styles, seasonal ingredients and cooking skills. We cook and eat the things we have made. Children are excited by design technology and look forward to their next topic, becoming increasingly ambitious in their designs.

DT Topic and Skills Overview

EYFS	Subject Rationale:	Skills:
	<p>DT in the EYFS is embedded within the areas of learning Physical Development, Understanding the World and Expressive Arts and Design. Pupils learn to develop their motor, construction and creative skills. Pupils are encouraged to self-select materials and begin to join and assemble their own projects. Pupils begin to identify and recognise colours. They explore a variety of materials, look at how things work, begin to construct and develop an understanding of food technology by preparing simple food tasks.</p> <p>This all together helps to prepare them for Year 1, where they will begin to prepare healthy meals in Food Technology and use a range of materials for DT projects.</p>	<p>Early Learning Goals:</p> <ul style="list-style-type: none"> • Understands that different media can be combined to create new effects • Manipulates materials to achieve a planned effect • Constructs with purpose in mind, using a variety of resources • Uses simple tools and techniques competently and appropriately • Selects tools and techniques needed to shape, assemble and join materials • Develops his/hers own ideas through selecting and using materials and working on processes that interest him/her (ELG) • Finds out and makes decisions through his/her explorations, about how media and materials can be combined and changed (ELG)
Year One:	Subject Rationale:	Skills:
<p>Autumn: Textiles</p>	<p>TEXTILES: Pupils begin to explore and join different textiles. They use a basic running stitch to create a bookmark.</p> <p>This helps prepare them for Year 2, where they will use sewing techniques to join two pieces of fabric.</p>	<ul style="list-style-type: none"> • Use a basic running stitch. • Use cutting, shaping, joining & finishing. • Use simple finishing techniques to improve the appearance of a product. • With help, measure, mark out, cut and shape a range of materials.
<p>Spring: Textiles Food technology</p>	<p>CONSTRUCTION: Pupils continue to work with a range of materials, including clay.</p> <p>FOOD TECHNOLOGY: They begin food technology and develop an understanding of basic food hygiene as well as beginning to use simple ingredients and tools.</p>	<ul style="list-style-type: none"> • Basic food handling, practices and personal hygiene • To select and use appropriate fruit and vegetables, processes and tools. • To evaluate a product by discussing how well it works in relation to the purpose.

	This prepares them for Years 2 and 3, where pupils will develop their understanding of healthy eating further and begin to plan their own menus.	<ul style="list-style-type: none"> • To evaluate their product as they are developed, identifying strengths and possible changes they might make • To model their ideas in card and paper.
Summer:	<p>CONSTRUCTION: Pupils begin to construct and make mechanisms in vehicles. They begin to design and evaluate their work.</p> <p>This prepares them for KS2, where pupils will come up with their own designs and evaluate with more detail.</p>	
Year Two	Subject Rationale:	
Autumn:	<p>TEXTILES: Pupils begin to use felt to assemble and join to make a product. They use running stitch which they have previously learnt in Year 1 but they also learn to join two pieces of material.</p> <p>CONSTRUCTION: Pupils begin to construct Great Fire of London Houses and begin to develop their design ideas further by making observational drawings and models.</p> <p>This prepares them for Year 3, where they use sewing techniques to tape and join with more accuracy. As well as being able to generate more ideas for their products.</p>	<p>Skills:</p> <ul style="list-style-type: none"> • To cut, shape and join fabric to make a simple garment. Use basic sewing techniques. • To assemble, join and combine materials in order to make a product. • To develop their design ideas through discussion, observation, drawing and modelling • To identify a purpose for what they intent to design and make • Follow safe procedures for food safety and hygiene. • Talk about ideas, saying what they like and dislike about them.
Spring:	<p>Food Technology: In Year 2 Pupils continue to develop their understanding of food hygiene and begin to follow safe procedures such as cutting and preparing vegetables.</p> <p>This Prepares them for Year 3, where pupils will be asked to demonstrate hygienic food preparation and learn how to store the food they have prepared.</p>	<ul style="list-style-type: none"> • To cut, shape and join fabric to make a simple garment. • Use basic sewing techniques • To assemble, join and combine materials in order to make a product.
Summer:	<p>CONSTRUCTION: Pupils will also work on their design ideas and modelling using clay.</p> <p>TEXTILES:</p>	

	<p>Pupils will continue to use the simple sewing techniques to shape and join to make a simple puppet.</p> <p>This Prepares them for Year 3, where pupils will be asked to communicate design proposals by modelling ideas and cut and join fabric with more accuracy.</p>	
Year Three	Subject Rationale	Skills:
Autumn:	<p>TEXTILES: Pupils will continue to work on their sewing skills. They will learn to cross stitch and continue to practice any simple sewing techniques they learnt in KS1.</p> <p>CONSTRUCTION: Pupils will continue to construct and generate ideas when making Stone Age houses with wood. They will evaluate their work to decide which structure is the best.</p> <p>This prepares them for Year 4, where they will learn other more complex stitching techniques. As well as learning to evaluate their work with more detail.</p>	<ul style="list-style-type: none"> • to measure, tape or pin, cut and join fabric with some accuracy • to generate ideas for an item, considering its purpose and the user/s • measure, mark out, cut, score and assemble components with more accuracy • demonstrate hygienic food preparation and storage • to disassemble and evaluate familiar products • to explore, develop and communicate design proposals by modelling ideas
Spring:	<p>CONSTRUCTION: Pupils will begin to construct using card levers & linkages. They will assemble with more accuracy.</p> <p>FOOD TECHNOLOGY: In Year 3 pupils will be asked to planning a healthy meal/menu demonstrating hygienic food preparation and storage.</p> <p>This helps to prepare them for the investigation they go on to do in Year 4.</p>	
Summer:	<p>CONSTRUCTION: Pupils will construct using clay to make Canopic jars. They will be encouraged to mark, cut, score and assemble components with more accuracy.</p> <p>This helps to prepare pupils for Year 5, where they are asked to select appropriate tools for making their products.</p>	

Topics	Year Four	Skills:
Autumn:	<p>FOOD TECHNOLOGY: In Year 4 pupils will be asked to make bread as well as applying the basic food hygiene rules they learnt in Year 3.</p> <p>TEXTILES: Pupils continue to explore sewing techniques and use a variety of stitches; running, blanket, back stitch, chain stitch.</p> <p>This builds on the sewing techniques children have already learnt and the basic food preparation skills.</p>	<ul style="list-style-type: none"> • to apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens • to sew using a range of different stitches, to weave and knit • to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques • to measure, tape or pin, cut and join fabric with some accuracy
Spring:	<p>FOOD TECHNOLOGY: In this term pupils will be asked to do a healthy eating investigation -Mexican feast/using fruit and vegetables.</p> <p>TEXTILES: Pupils will continue to work on their skills of using basic tools appropriately to design masks using Modroc.</p> <p>This helps to prepare children for Year 5, where they will design their own Greek feast and in Year 6 when they will make Modroc gadgets.</p>	<ul style="list-style-type: none"> • to apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens • to select appropriate tools and techniques for making their product • -to 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 • to evaluate their work both during and at the end of the assignment
Summer:	<p>CONSTRUCTION: Pupils will be asked to make pop up books using levers/linkages which builds on the work they did on this in Year 3. They will also add to this by using a graphical communication technique.</p> <p>This will help to prepare the pupils when they use results of their investigations, information sources using ICT to develop ICT ideas in Year 6.</p>	<ul style="list-style-type: none"> • to use simple graphical communication techniques

Topics	Year Five	Skills
<p>Autumn:</p>	<p>CONSTRUCTION: Pupils will begin to draw up a specification for a model of the Titanic. They will be asked to measure and mark out accurately which builds on from previous year groups. They will also be asked to ensure their model has a good-quality finish.</p> <p>TEXTILES: In Year 5 pupils will begin to use applique sewing to make a good quality finished product.</p> <p>FOOD TECHNOLOGY: Pupils will continue to work on their food hygiene to make Jewish bread. They will learn the new skill of weighing and measuring out ingredients.</p> <p>This will prepare them for Year 6, where they will be asked to make permanent joining techniques as well as choosing appropriate materials.</p>	<ul style="list-style-type: none"> • -to draw up a specification for their design • -to evaluate it personally and seek evaluation from others • -to measure and mark out accurately • -to cut and join with accuracy to ensure a good-quality finish to the product • -to weigh and measure accurately (time, dry ingredients, liquids) • -to apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens • -to use results of investigations, information sources, including ICT when developing design ideas • -to 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 • -to weigh and measure accurately (time, dry ingredients, liquids)
<p>Spring:</p>	<p>FOOD TECHNOLOGY: Pupils will build on the work they did in Year 3 and 4 when they are asked to design a healthy and balanced meal.</p> <p>TEXTILES: Pupils will be asked to design Greek pots using clay where they will be asked to measure and mark out accurately.</p> <p>This will prepare them for Year 6, where they plan the gadget they make as well as taking on more responsibility in the kitchen.</p>	
<p>Summer:</p>	<p>CONSTRUCTION: Pupils will create a Greek temple using balsa wood and dowelling and they will be asked to develop a clear idea of what has to be done as well as suggesting alternative methods if required. This will build on the woodwork they did in Year 3.</p>	

	<p>FOOD TECHNOLOGY: Pupils will be asked to continue to apply basic rules of food hygiene to make a Greek Feast.</p> <p>This will prepare them for Year 6, where they will be asked to construct using permanent joining techniques as well as weighing and measuring ingredients for cooking.</p>	
Topics	Year Six	Skills
Autumn:	<p>TEXTILES: In Year 6 pupils are asked to use a variety of sewing skills – including hand stitches to create a product.</p> <p>This prepares them for KS3, where pupils will build and apply a repertoire of knowledge, understanding and skills in order to design and make high quality prototypes and products for a wide range of users.</p>	<ul style="list-style-type: none"> • to construct products using permanent joining techniques • to pin, sew and stitch materials together to create a product • to weigh and measure accurately (time, dry ingredients, liquids) • to apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens • to plan the order of their work, choosing appropriate materials, tools and techniques • to develop a design specification • to assemble components to make working models • to explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways
Spring:	<p>FOOD TECHNOLOGY: Pupils continue to develop their cooking skills to make war time cakes.</p> <p>CONSTRUCTION: Pupils will make MODROC gadgets constructing using permanent joining techniques.</p> <p>This prepares them for KS3, where pupils understand and apply the principles of nutrition and learn how to cook.</p>	
Summer:	<p>MECHANISMS: Pupils are asked to design and make models using motors and model their ideas in a variety of ways.</p> <p>This prepares them for KS3, where pupils will critic, evaluate and test their ideas and products.</p>	