

Key Stage 3 Design Technology

Pupils should be taught to develop and utilise their skills learned within design and technology. They should be able to confidently follow the design, make and evaluate strategy and use this with an element of independence within their design and technology learning. Pupils should begin to transfer their design and technology skills across the curriculum and through wider life.

Pupils should be taught:

- to develop the creative, technical and practical expertise to perform tasks confidently.
- build and apply understanding and skills to design and make prototypes and products for a wide range of users.
- assess, evaluate and test their products and ideas of others.

All skills learned within design and technology are transferable across many aspects of the curriculum and can also be developed to have an impact on pupils in everyday life.

7	Topic	Woodwork	Environmental	Sewing and textiles	C.A.D	Horticulture and Forest School
	Covers skills and knowledge in Steps 5, 6, 7, 8 and 9	In this woodwork unit, pupils will design, make and evaluate desk tidy against a given criteria.	In this environmental unit, pupils will design, make and evaluate a recycled stationery holder.	In this sewing and textiles unit, pupils will design, make and evaluate a pair of slippers.	In this C.A.D unit, pupils are to design, make and evaluate a shop sign for a business.	In this horticulture unit, pupils will learn to grow their own plants and vegetables. In this forest school unit, pupils will learn basic survival skills such as firemaking.
	Pupils should	Pupils will design, make and	Pupils will design, make and evaluate	Pupils will design, make and evaluate a pair of slippers using their own design	Pupils will use 3D software and visit	Pupil will develop their based

<p>know... (Core knowledge and concepts to be learned)</p>	<p>evaluate and desk tidy using a given criteria.</p> <p>Skills will be developed such as designing, measurement, cutting and wood engraving.</p> <p>Pupils will apply their already solid understanding of the health and safety procedures that apply in a design and technology classroom.</p>	<p>a stationary holder fit for a classroom purpose.</p> <p>The stationary holder will hold pens and pencils and be made from recycled materials that will include a dispatch lever.</p> <p>Pupils will design, make and evaluate the product for the classroom using a given criteria.</p>	<p>criteria,</p> <p>These slippers will be made using old, recycled materials to highlight the importance of recycling.</p> <p>Skills that are to be developed are cutting work, needlework and embroidery.</p>	<p>local places for the correct computing and printing access to allow this unit to be accessible.</p> <p>Pupils will create links with local business in order to create their own design criteria for this product.</p>	<p>understanding of horticulture and put this into a design, make and evaluate process to grow their own plants and vegetables.</p> <p>Pupil will know the cycle of planting and growing different types of plants and vegetables.</p> <p>Pupils will develop their basic understanding of forest school skills.</p> <p>Pupils will understand the health and safety aspects of firemaking and the times that firemaking will be applicable.</p>
<p>Pupils should</p>	<p>Investigates how to make a</p>	<p>Make a lever with assistance.</p>	<p>Demonstrates care using tools, when supervised.</p>	<p>Creates simple programmes using</p>	<p>Lists physical features of their</p>

	<p>be able to do... (Skills being developed)</p>	<p>structure stiffer and more stable.</p> <p>Makes a product using simple tools successfully.</p> <p>Follows simple plans to make a product.</p>	<p>Investigate how to make a structure stronger.</p> <p>Makes holes in softwood using a hand drill.</p>	<p>Discusses and explains their ideas.</p> <p>Identifies tools which could be dangerous.</p> <p>Cares for tools and materials.</p> <p>Makes a structure more stable, stiff or strong after simple testing.</p>	<p>symbols.</p> <p>Designs products for different contexts.</p> <p>Selects materials generally appropriate to the task when making a product.</p>	<p>surrounding area during fieldwork.</p> <p>Records their observations.</p> <p>Describes the effect of weather conditions.</p> <p>Simply describes the importance of some physical geographic features in their locality.</p>	
	<p>Key Vocabulary</p>	<p>Evaluate, clasp, junior hacksaw, criteria, joinery, measurement.</p>	<p>Appearance, mechanism, lever, dispatch.</p>	<p>Develop, design, recycling, needlework, embroidery.</p>	<p>Software, printing, access, design, business.</p>	<p>BSquared forest school and horticulture targets.</p>	
8	<p>Topic</p> <p>Covers skills and knowledge in Steps 7, 8, 9 and 10</p>	<p>Woodwork</p> <p>In this woodwork unit, pupils will design, make and evaluate a pendant box.</p>	<p>Environmental</p> <p>In this environmental unit, pupils will design, make and evaluate a recycled bench.</p>	<p>Sewing and textiles</p> <p>In this sewing and textiles unit, pupils will design, make and evaluate teddies.</p>	<p>C.A.D</p> <p>In this C.A.D unit, pupils are to design, make and evaluate a keyring.</p>	<p>Horticulture</p> <p>In this horticulture unit, pupils will design, create and evaluate their own horticulture centre.</p>	<p>Forest School</p> <p>In this Forest School unit, pupils will extend their current knowledge and skills including firemaking, survival skills.</p>

<p>Pupils should know... (Core knowledge and concepts to be learned)</p>	<p>Pupils will develop their designing, making and evaluating skills within this topic.</p> <p>Pupils are to make a pendant box using skills already gained and will be allowed the opportunity to develop these skills.</p> <p>Pupils will use more complex tools and develop their cutting and sawing skills in this project.</p>	<p>Pupils will use our links with Tam O'Shanter Urban farm.</p> <p>Pupils will visit the farm to gain an idea of the design criteria that is required for them to move forward with this project.</p> <p>Pupils will collect relevant materials independently for this project.</p> <p>This topic will inform the importance of recycling.</p> <p>Pupils will use an array of tools within this topic.</p>	<p>Pupils will develop their sewing and textiles skills to design, make and evaluate teddies from recycled materials.</p> <p>Pupils will use surveys and gather data in order to inform and create their design criteria.</p> <p>Pupils will use recycled materials and consolidate their understanding surrounding the importance of recycling.</p>	<p>Pupils will utilise and develop their skills that they have already gained during previous C.A.D topics in order to create a keyring.</p> <p>These keyrings will be designed and made based on a design criteria that pupils will receive from a local business.</p> <p>These keyrings will need to be made a on mass scale to pupils will need to consider materials and costs within their design process.</p>	<p>Pupils will design a horticulture centre using a set area of ground.</p> <p>Pupils will then decide the certain aspects of their horticulture centre.</p> <p>During this topic, pupils will be given the opportunity to build relationships with the lower skill and assist with their horticulture lessons.</p> <p>Pupils will become 'horticulture buddies' with a pupil within the lower school and share their skills.</p>	<p>Pupils will broaden their horizons in terms of locality.</p> <p>Pupils will become involved with forest school sites at other locations.</p> <p>Pupils will assist by utilising their current skills in knowledge at Tam O'Shanter Urban Farm.</p>
<p>Pupils should be able to do...</p>	<p>Pupils should be able to:</p>	<p>Pupils should be able to:</p> <p>Choose different</p>	<p>Within this topic, pupils should be able to:</p>	<p>Within this topic, pupils should be able to:</p>	<p>Demonstrates some simple techniques e.g. podding, picking, hulling.</p>	<p>Explores the information that they have collected.</p>

	(Skills being developed)	<p>Choose different joints that are generally appropriate to the task.</p> <p>Remove rough edges using sandpaper.</p> <p>Saw using a junior hacksaw with some support.</p> <p>Clasp and object in a vice with some support.</p>	<p>joints that are generally appropriate to the task.</p> <p>Remove rough edges using sandpaper.</p> <p>Saw using a junior hacksaw with some support.</p>	<p>Suggest how to make their structure stronger, more stable or stiffer using simple techniques.</p> <p>Join textiles using glue, staples or stitches.</p> <p>Employ simple finishing techniques to enhance their product.</p>	<p>Describe how improvements suggested by others would improve their final product.</p> <p>Explains reasons behind why the modifications were made.</p> <p>Decides on a criteria for a product.</p>	<p>Picks out the ingredients from a range of foods needed in a specific recipe.</p> <p>Recognises ways to recycle some food and drink packaging.</p> <p>Describes different types of farming.</p>	<p>Answer questions about the results that they have gathered.</p> <p>Creates a recognisable map with symbols in a key of a familiar place.</p> <p>Describes similarities and differences they have found when comparing different places.</p> <p>Suggests some obvious effects of a human feature on the environment during fieldwork.</p>
	Key Terminology	Joints, sandpaper, clasp, vice, junior hacksaw.	Clasp, joint, sandpaper, create, recycled.	Technique, enhanced, stitches, stable, suggest.	Criteria, modification, improve, product, purpose.	Packaging, farming, recycle, recipe, ingredients, range.	Effects, human, feature, fieldwork, environment, familiar.
	Topic	Woodwork In this woodwork unit, pupils will	Environmental In this environmental unit, pupils are to	Sewing and textiles In this sewing and textiles unit, pupils	C.A.D In this C.A.D unit, pupils will create	Horticulture and Forest School. In this horticulture and forest school topic, the two subjects will be combined.	

9		design, make and evaluate a chair using a given criteria.	create their own version of bug art.	are to use design, make and evaluate to create items of clothing.	their own computer programme.	All skills and knowledge will be brought together during off site education.
	<p>Pupils should know... (Core knowledge and concepts to be learned)</p> <p>Covers skills and knowledge in Steps 7, 8, 9 and 10</p>	<p>Pupils will develop their woodwork skills within this project to design, make and evaluate a wooden chair.</p> <p>Pupils will research and understand different types of wood and the advantages and disadvantages of using certain wood in different contexts.</p> <p>Pupils will consolidate their health and safety understanding surrounding design and technology.</p>	<p>Pupils will be given a design criteria to create a mystery bug.</p> <p>The mystery bug must fit within the design criteria and tick ten sections.</p> <p>Pupils will be given a certain amount of recycled objects to use and must make their design fit in with the criteria using this.</p> <p>Pupils will develop their skills using a wide range of tools.</p>	<p>Pupils will create and build links with local charity shops. Pupils will receive a design criteria for a fashion range to be launched in partnership with charities.</p> <p>Pupils are to design, make and evaluate a range of clothing in line with the design criteria.</p> <p>All products created within this unit must be done so with recycled items.</p>	<p>Pupils will create their own computer programme that will work with 3D printing software.</p> <p>Pupils will design an advertising campaign and launch their software.</p> <p>Pupils will pitch their product to local businesses that use 3D printing software and use feedback to make modifications to their work.</p>	<p>Pupils will partake in expeditions and visits to areas in different locations within the country.</p> <p>Pupils will use all of their skills and knowledge and bring all of this together to achieve their Duke of Edinburgh award.</p> <p>Before completing the award, pupils will make visits to various locations across the country to prepare themselves for their award.</p> <p>Pupils will bring together all of their survival skills, forest school skills and horticulture skills during visits away.</p> <p>Pupils will grow fruit, vegetables and herbs that will be utilised by school.</p> <p>Pupils learn how to inform people using their produce of the nutritional information surrounding the produce that they have grown.</p>

		Pupils will expand their skills in using different types of tools fit for a certain purpose.			Pupils will then tutor lower school into how their computer software works.	
	Pupils should be able to do... (Skills being developed)	<p>Identifies and solves their own design problems and understands how to reformulate problems given to them.</p> <p>Evaluates their work regularly throughout the design and makes progress.</p> <p>Organises practical work consistently so that processes are carried out accurately.</p>	<p>Uses a variety of approaches to generate creative ideas and avoid stereotypical responses.</p> <p>Works mostly to plan, correcting any mistakes with little help.</p> <p>Develops a detailed specification that will inform innovative and appealing design ideas that are suitable for a specific user.</p>	<p>Joins materials using temporary fastenings.</p> <p>Joins materials using permanent fastenings.</p> <p>Designs products to be used in different contexts.</p> <p>Uses a range of tools, equipment, materials and components with precision to complete a well finished product.</p>	<p>Investigates new and emerging technologies.</p> <p>Analyses the work of past and present professionals and others to develop and broaden their understanding.</p> <p>Understands the responsibilities of designers, engineers and technologists.</p>	<p>Present information gathered during fieldwork using different methods.</p> <p>Draws simple maps using a range of scales.</p> <p>Presents information gathered during fieldwork in a range of ways showing how physical and human features of an area studied interact with each other.</p> <p>Uses feature specific vocabulary when describing features of physical and human geography.</p> <p>Evaluates the food they have prepared or cooked, giving reasons why it did or did not go to plan.</p> <p>Taste tests different herbs and spices, using findings to plan their inclusion in a recipe.</p>

		Takes into account the properties of materials, explaining why they are used.	Employs specialist equipment to produce a product/part of a product.	Evaluates their work regularly through the design and making process.		Suggests ways to recycle foods. Recognises energy is measured in kilo joules and kilo calories.
	Key Terminology	Purpose, junior hacksaw, support, clasp, instructions.	Junior hacksaw, household, mystery, vice.	Materials, products, contexts, permanent, fastenings, clothing.	Modification, programmable, components, adaptation, programme.	Recycle, calories, joules, herbs, spices, prepared, cooking, inclusion, recipe.