



Christ Church CE & Lewis Street Primary Schools



Design and Technology

Aims

The National Curriculum for Design and Technology aims to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday
- Tasks confidently and to participate successfully in an increasingly technological world
- 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
- Critique, evaluate and test their ideas and products and the work of others
- Understand and apply the principles of nutrition and learn how to cook.

Intent

What are we trying to achieve for our children in Design and Technology?

- To be creative and imaginative
- To develop skills that are transferable to other aspects of the curriculum and their lives
- To be real life problem solvers in a variety of contexts
- To open the world of engineering and enterprise to them
- To develop their design skills through evaluation and critical thinking
- To explore future opportunities and aspirations related to Design Technology

Implementation

How is the curriculum delivered?

- Through steps of milestone progression across year groups
- Parental session/workshops in EYFS
- Whole class differentiation through questioning and equipment
- Through the use of appropriate trips and visits
- Through a 2 week time table



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- 30 hours per year delivered

Impact

What difference is the curriculum making?

- Children will become more imaginative and creative across the curriculum
- To develop children into creative, innovative and enterprising citizens
- Children will become critical thinkers who are willing to challenge and take calculated risks
- A higher profile of Design and Technology across the Partnership



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Design

Make

Evaluate



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Threshold Concept	Milestone 1 Years 1 and 2	Milestone 2 Years 3 and 4	Milestone 3 Years 5 and 6
Design	<ul style="list-style-type: none"> • To discuss given stimulus beginning to give opinions • To discuss the use of a product • To discuss the features of a product • To draw/design a new product based on the given stimulus • To make comments/explanations of their design • To understand a product needs to be functional and purposeful • To begin to select suitable materials from a given range 	<ul style="list-style-type: none"> • To discuss given stimuli giving opinions and critical thinking • To begin to research stimuli further • To begin to analyse the use of a product and it's features • To draw/design a product based on a given criteria • To design a purposeful, functional and attractive product • To produce a step by step explanation of their design • To select appropriate materials and tools with reasoning from a given range 	<ul style="list-style-type: none"> • To Research own stimuli on a given theme • To analyse the use of an existing product and it's features and evaluate its usefulness and attractiveness • To draw/design a product based on researched theme • To design a purposeful, functional and attractive product focusing on a given audience • To produce a detailed step by step explanation of their design with reasoning • Begin to foresee problems and discuss how these will be solved by the design • To select appropriate materials and tools with reasoning • To begin to use IT in design where appropriate



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Threshold Concept		Milestone 1 Years 3 and 4	Milestone 2 Years 3 and 4	Milestone 3 Years 5 and 6
Make	Structure	<ul style="list-style-type: none"> To explore and investigate how to make a product stronger, stiffer and more stable by using a given range of materials Explore the use of a choice of materials to make the product from Use PVA glue, glue stick, cellotape, scissors proficiently Explore and investigate mechanisms such as levers, sliders, wheels and axles With adult support begin to use levers, sliders, wheels & axles in their own designs 	<ul style="list-style-type: none"> To discuss how and where a product may need to be stronger and stiffer (inc the structure of buildings, bridges etc) and choose the correct material to do this Suggest and choose appropriate materials to make a product from and give reasons for this choice To choose the correct product to join materials together beginning to giving reasons for the choice. Explore, research and investigate mechanisms such as levers, sliders, wheels and axles Recognise where a product will need a levers, sliders, wheels and/or axles in their own designs and give explanations for this 	<ul style="list-style-type: none"> Understand that the design and shape or something gives products strength and choose where to use these in their products (e.g. arches) Research the materials current products are made from and investigate and explore materials for their design using this knowledge. Chn to give justifications and reasons for their choice consider types of joints that provide strength and choose the most appropriate product to joint things with Through their design consider the purpose of their product and choose any mechanisms that are needed including the use of electronics for lights, sound, movement etc
	Mechanisms			
	Electronics			



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	Textiles	<ul style="list-style-type: none">• Join fabrics and materials using glue and simple running stitch etc• Name tools such as glue spreader, needle, thread• Use good scissor control to cut along a line• With adult support use scissors to cut fabric - begin to understand that fabric must be taut	<ul style="list-style-type: none">• Join fabrics using running stitch, back stitch and overcast stitch• Be able to thread a needle and knot thread• Independently or with peer support use scissors to cut fabric ensuring the fabric is taut• Begin to embroider basic patterns onto fabric for a purpose• Begin to sew in openers with adult guidance and support (buttons, press studs, velcro, zips)	<ul style="list-style-type: none">• Join fabrics using previously tight stitches and blanket stitch• Use the invisible stitch to close up openings• To be able to choose appropriate needle size and know and sew with cotton• Be able to hold fabric taut whilst cutting and sewing• Choose and sew in appropriate openers to products (buttons, press studs, velcro, zips)
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	Nutrition	<ul style="list-style-type: none"> • Understand that all food comes from animals or plants • Understand that all food is farmed or caught • Be able to sort food into the five groups on the Eatwell plate • Understand that we must wash a working area and our hands before beginning cooking • With adult guidance and supervision begin to cut, peel and grate foods • With adult guidance and supervision measure our ingredients 	<ul style="list-style-type: none"> • Understand that all food is grown, reared or caught in the UK or is imported • Understand that food and drink give us energy • Begin to plan and make own decisions on a healthy diet based on the Eatwell plate • Understand basic hygiene around cooking including washing hands, surfaces and products • Begin to understand cross contamination or raw and cooked foods, vegetarian, nuts, dairy etc • With adult supervision cut, slice, peel, grate, mix, spread, knead • Begin to use heat and understand the use and danger of hot appliances 	<ul style="list-style-type: none"> • Understand what affects the productions of food • Understand that food is processed to produce new products or ingredients • Plan and make own decisions on a healthy diet based on the Eatwell plate • Explain the reasons for hygiene in a kitchen and link it to food safety • With adult supervision cut, slice, peel, grate, mix, spread, knead confidently and be able to choose the appropriate technique for a recipe • Use heat and understand the use and danger of hot appliances • Use knowledge to design on recipes and understand that amounts of ingredients can be changes to create different effects/tastes
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Threshold Concept	Milestone 1 Years 1 and 2	Milestone 2 Years 3 and 4	Milestone 3 Years 5 and 6
Evaluate	<ul style="list-style-type: none"> To compare their finished product to their design To discuss the WWW & EBI of their products and design To suggest and begin to make improvements to their products based on evaluation 	<ul style="list-style-type: none"> Chn to test their product and evaluate whether it does its jobs, suits its purpose etc. Chn to go back to their original designs and make annotations about the WWW and EBIs of their designs With the support of class discussions and teacher guidance chn to make changes to their original design in order to improve on the EBI's Chn to begin to reason why they have made the changes they have and how it will improve their product Chn to be begin to offer constructive criticism to their peers considering the use of the product 	<ul style="list-style-type: none"> Chn to try and pre-empt problems with their designs at the designing stage and try and put preventative measures in place. Chn to evaluate the suitability and use of their product and write up an analysis giving details of weaknesses and strengths Chn to compare the successes and problems of their products with the products of others Chn to produce further research into their designs and strengthen and improve any weakness Chn to offer constructive criticism to peers and offer advise on how to solve Chn to complete the make, test, review process independently