New Curriculum Holy Trinity CE Primary Academy – 2013-14

Subject: Design & 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.

Skills:

Progression of skills in Design and Technology

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas.	to draw on their own experience to help generate ideas	generate ideas by drawing on their own and other people's experiences	to generate ideas for an item, considering its purpose and the user/s	how to generate ideas, considering the purposes for which they are designing	to generate ideas through brainstorming and identify a purpose for their product	to communicate their ideas through detailed labelled drawings
	to suggest ideas and explain what they are going to do	to develop their design ideas through discussion, observation , drawing and modelling	to identify a purpose and establish criteria for a successful product.	to make labelled drawings from different views showing specific features	to draw up a specification for their design	to develop a design specification

	to identify a target group for what they intend to design and make	to identify a purpose for what they intend to design and make	to plan the order of their work before starting	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 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 explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways
	to model their ideas in card and paper	to identify simple design criteria	to explore, develop and communicate design proposals by modelling ideas			to plan the order of their work, choosing appropriate materials, tools and techniques
	to develop their design ideas applying findings from their earlier research	to make simple drawings and label parts	to make drawings with labels when designing	to evaluate products and identify criteria that can be used for their own designs	to use results of investigations, information sources, including ICT when developing design ideas	
Working with tools, equipment, materials and components to make quality products	to make their design using appropriate techniques	begin to select tools and materials; use vocab' to name and describe them	to select tools and techniques for making their product	to select appropriate tools and techniques for making their product	to select appropriate materials, tools and techniques	to select appropriate tools, materials, components and techniques
	With help measure, mark out, cut and shape a range of materials	to measure, cut and score with some accuracy	measure, mark out, cut, score and assemble components with more accuracy	to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques	to measure and mark out accurately	to assemble components to make working models
	how to use tools *eg scissors and a hole punch* safely	to use hand tools safely and appropriately	to work safely and accurately with a range of simple tools	to join and combine materials and components accurately in temporary and permanent ways	to use skills in using different tools and equipment safely and accurately	to use tools safely and accurately
	to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape	to assemble, join and combine materials in order to make a product	to think about their ideas as they make progress and be willing to change things if this helps them to improve their work	to sew using a range of different stitches, to weave and knit		to construct products using permanent joining techniques
	to select and use appropriate fruit and vegetables, processes and tools	to cut, shape and join fabric to make a simple garment. Use basic sewing techniques	to measure, tape or pin, cut and join fabric with some accuracy	to measure, tape or pin, cut and join fabric with some accuracy	to weigh and measure accurately (time, dry ingredients, liquids)	to make modifications as they go along
	basic food handling, hygienic practices and personal hygiene	follow safe procedures for food safety and hygiene	demonstrate hygienic food preparation and storage		to apply the rules for basic food hygiene and other safe practices *e.g. hazards relating to the use of ovens*	to pin, sew and stitch materials together to create a product
	use simple finishing techniques to improve the appearance of their product	to choose and use appropriate finishing techniques	to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT	to use simple graphical communication techniques	to cut and join with accuracy to ensure a good-quality finish to the product	to achieve a quality product
Evaluating processes and products	to evaluate their product by discussing how well it works in relation to the purpose	to evaluate against their design criteria	to evaluate their product against original design criteria *e.g. how well it meets its intended purpose*	to evaluate their work both during and at the end of the assignment	to evaluate a product against the original design specification	to evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests
	to evaluate their products as they are developed, identifying strengths and possible changes they might make	to evaluate their products as they are developed, identifying strengths and possible changes they might make	to disassemble and evaluate familiar products	to evaluate their products carrying out appropriate tests	to evaluate it personally and seek evaluation from others	to record their evaluations using drawings with labels

	to evaluate their product by asking questions about what they have made and how they have gone about it	talk about their ideas, saying what they like and dislike about them				to evaluate against their original criteria and suggest ways that their product could be improved

Contents:

KS1

- Build structures exploring how they can be made stronger, stiffer and more stable
- Explore and use mechanisms, such as levers, sliders, wheels and axles, in their products

KS2

- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages
- Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors
- Apply their understanding of computing to programme, monitor and control their products

In addition, Cooking & Nutrition

Key stage 1

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from

Key stage 2

- Understand and apply the principles of a healthy and varied diet
- Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- Understanding seasonality, and know where and how a variety of ingredients are grown, caught and processed.

Links:

Computing, geography (origin of foods), Art (designs), history & RE (through topic), science (e.g. electricity), English (instructions, captions, labels), maths (measuring)