

STANBURN DESIGN TECHNOLOGY VISION

- 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.

DT BREADTH OF STUDY

Across the school, the following areas are covered, with progression planned and built in. Units are linked with the themes for each year group.

	Food Technology	Textiles	Mechanisms	Structures	Circuits/ Electronics
RECEPTION	Breadsticks Coconut barfi Making and tasting soup Making and tasting porridge Planting a bean	Making a class cloak	Christmas pop up card Split pin bears Story masks/puppets	Firework Rocket Construction building site Creating the giant's castle Emergency Vehicles Creating a trap for the robbers	Beebots/remote control cars (ICT)
YEAR 1	Fruit/Vegetable Salad		Christmas - moving cards	Build bridges	
YEAR 2	Healthy Party Food	Animal Puppets		Build houses	
YEAR 3	Curry and Chapattis Read and write Recipes		Information pop up books	Christmas Gift boxes	
YEAR 4	Greek food (part of Greek day) Not a unit		Roman catapult	Musical instruments	Night lights
YEAR 5	Carrot biscuits + CAD packaging	Anglo-Saxon purses	Cam toys		
YEAR 6	Plant-based food	Phone/Laptop case CAD			Security lighting

	Develop, plan and communicate ideas	Make quality products	Evaluate processes and products	Inspiration from design through history
RECEPTION	<ul style="list-style-type: none"> •Begin to use the language of designing and making, e.g. join, build and shape. •Learning about planning and adapting initial ideas to make them better. 	<ul style="list-style-type: none"> •To learn to construct with a purpose in mind. •Selects tools and techniques needed to shape, assemble and join materials. 	<ul style="list-style-type: none"> •Start to think about how things work. •Evaluate the purpose of designs they find in their home and school. •Begin to think about how the materials they have used, work within their design. 	<ul style="list-style-type: none"> •Have an understanding that products are made by people or companies. •Be able to link some products to designers/companies e.g dyson - Hoover.
Key Stage 1				
YEAR 1	<ul style="list-style-type: none"> • Think of some ideas of their own • Explain what they want to do • Use pictures and words to plan 	<ul style="list-style-type: none"> • Explain what they are making • Explain which tools they are using and what it is for • Select from a range of materials according to characteristics. • With help measure, mark-out, cut and shape materials. 	<ul style="list-style-type: none"> • Describe how something works • Identify likes and dislikes of theirs and others designs and why • Is the product functional? - does it work in relation to the design criteria 	<ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs.
YEAR 2	<ul style="list-style-type: none"> • Think of ideas and plan what to do next • Choose the best tools and materials • Describe their design by using pictures and words in a diagram 	<ul style="list-style-type: none"> • Start to choose their tools and equipment, explaining their choices. • Measure, mark-out, cut and shape materials. • With support, assemble, join and combine materials and components together using a variety of temporary materials e.g. glue and masking tape. •Use basic sewing techniques. •Choose and use appropriate finishing techniques. • With help use hand tools safely. 	<p><u>Evaluate their product</u></p> <ul style="list-style-type: none"> • Explain what went well with their product against a success criteria • If they did it again, explain what they would improve <p><u>Evaluate a range of existing products</u></p> <ul style="list-style-type: none"> •Explain what they like and dislike about the products and why 	<ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created.
Lower Key Stage 2				
YEAR 3	<ul style="list-style-type: none"> • Show that their design meets a range of requirements • Put together a step-by-step plan which shows the order, equipment and tools needed • Describe their design using an accurately labelled sketch + words 	<ul style="list-style-type: none"> • Select tools and techniques for making their product. • Measure, mark out, score and assemble components with more accuracy. • Assemble, join and combine materials and components together using a variety of temporary materials e.g. glue and masking tape. • Think about their ideas as they make progress and be willing to change things if this helps them improve their work. • Work safely and accurately with a range of simple tools. 	<p><u>Evaluate their product</u></p> <ul style="list-style-type: none"> • Explain what went well and what they changed which made their design even better <p><u>Consider the views of others to improve their work</u></p> <ul style="list-style-type: none"> • Take on constructive criticism and begin to incorporate their peers ideas, to improve their design 	<ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study to generate ideas for designs. •who designed and made existing products •when were these products designed and made



<h2 style="text-align: center;">YEAR 4</h2>	<ul style="list-style-type: none"> • Come up with at least one idea for how to make their product • Produce a plan and explain it to others • Suggest some improvements and evaluate their original design 	<ul style="list-style-type: none"> • Select tools and techniques for making their product. • Draw, measure, mark out before cutting. • Assemble, join and combine a variety of materials. • Be conscious of the need to produce something that will be liked by others • Refine their product if the original idea doesn't work • Show a good level of expertise when using a range of tools and equipment. Carry this out safely 	<p><u>Evaluate their product</u></p> <ul style="list-style-type: none"> • How will they check if their design is successful? Carry out appropriate tests • Start to evaluate their work by referring to their design criteria both during and at the end • Begin to explain how to improve their original design • Evaluate their product both in terms of appearance and functionality <p><u>Consider the views of others to improve their work</u></p> <ul style="list-style-type: none"> • take on constructive criticism and begin to incorporate their peers ideas, to improve their design 	<ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Who designed and made existing products? • When were these products designed and made? • How well the products achieve their purpose eg material, methods of construction? • Disassemble products to understand how they work.
<h3>Upper Key Stage 2</h3>				
<h2 style="text-align: center;">YEAR 5</h2>	<ul style="list-style-type: none"> • Come up with a range of ideas after collecting information • Take the user's view into account when designing • Produce a detailed step-by-step plan • Suggest some improvements and evaluate their original design 	<ul style="list-style-type: none"> • Use skills in using different tools and equipment safely and accurately. • Make a good quality finished product • Explain how the product will appeal to the user • Pin, sew and stitch materials together to make a product. • Persevere through different stages of the making process • Use a range of tools and equipment with expertise. Carry this out safely. 	<p><u>Investigate and analyse a range of existing products</u></p> <ul style="list-style-type: none"> • how much would the products cost to make • how innovative they are • how sustainable materials are <p><u>Evaluate their ideas and products against their own design criteria</u></p> <ul style="list-style-type: none"> • continuously check their design as they go along • Use their own initiative to check if they need to improve and modify their work • Evaluate the appearance and function against their own design criteria <p><u>Consider the views of others to improve their work</u></p> <ul style="list-style-type: none"> • begin to seek evaluation from others • begin to incorporate others ideas in to their own designs, to make it more functional 	<ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history. • How much would the products cost to make? • How innovative are they? • How sustainable are materials? • Create innovative designs that improve upon existing products.

YEAR 6	<ul style="list-style-type: none"> • Use a range of information to inform the design • Use prototypes, cross-sectional diagrams and CAD to represent designs. • Follow and refine own plan after making changes to their initial design 	<ul style="list-style-type: none"> • Select appropriate tools, materials, components and techniques. • Assemble components to make working models. • Construct products using permanent joining techniques. • Change the way of plan/working as and when needed • Pin, sew and stitch materials together to make a product. • Achieve a quality product. • Use a range of tools and materials with precision. Carry this out safely. 	<p><u>Investigate and analyse a range of existing products</u></p> <ul style="list-style-type: none"> • how much would the products cost to make • how innovative they are • how sustainable the end product is <p><u>Evaluate their ideas and products against their own design criteria</u></p> <ul style="list-style-type: none"> • evaluate a prototype of their design before making their final work • test and evaluate the final product • consider the use of the product when selecting materials • make a product which meets all the design criteria <p>Consider the views of others to improve their work</p> <ul style="list-style-type: none"> • seek evaluation from others • begin to incorporate others ideas in to their own designs, to make it more functional 	<ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • How much would the products cost to make? • How innovative are they? • How sustainable are materials? • Evaluate the design of products to suggest improvements to the user experience.
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	Food technology – Cooking and Nutrition			
	EYS	Across KS1	Across Lower KS2	Across Upper KS2
<p>Teaching cooking and nutrition</p> <p>Understanding food and food preparation</p>	<p>Children begin to develop a food vocabulary using taste, smell, texture and feel.</p> <p>They start to think about the need for a variety of foods in a diet.</p> <p>Children can</p> <ul style="list-style-type: none"> • use words to describe textures of food • use words to describe smell of food • understand the importance of fruit and vegetables in diet • understand where some food comes from • can identify some tools to preparation of food 	<p>Children use the basic principles of a healthy and varied diet to prepare dishes. They understand where food comes from.</p> <p>Children can:</p> <ul style="list-style-type: none"> • explain where in the world different foods originate from; • understand that all food comes from plants or animals; • understand that food has to be farmed, grown elsewhere (e.g. home) or caught; • name and sort foods into the five groups in the Eatwell Guide; • understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why; • use what they know about the 	<p>Children understand and apply the principles of a healthy and varied diet. They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p>Children can:</p> <ul style="list-style-type: none"> • start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world; • understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically; • with support, use a heat source to cook ingredients showing awareness 	<p>Children understand and apply the principles of a healthy and varied diet. They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p>Children can:</p> <ul style="list-style-type: none"> • know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world; • understand about seasonality, how this may affect the food availability and plan recipes according to



		<p>Eatwell Guide to design and prepare dishes.</p>	<p>of the need to control the temperature of the hob and/or oven;</p> <ul style="list-style-type: none">• use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking;• explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes;• understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;• prepare ingredients using appropriate cooking utensils;• measure and weigh ingredients to the nearest gram and millilitre;• start to independently follow a recipe;• start to understand seasonality.	<p>seasonality;</p> <ul style="list-style-type: none">• understand that food is processed into ingredients that can be eaten or used in cooking;• demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;• demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;• explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;• adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;• alter methods, cooking times and/or temperatures;• measure accurately and calculate ratios of ingredients to scale up or down from a recipe;• independently follow a recipe.
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