



National Curriculum Objectives	Design Technology	
<p>EYFS:</p> <p>To safely use and explore a variety of materials, tools and techniques. To represent their own ideas, thoughts and feelings through design and technology. To handle equipment and tools effectively. To know the importance of a healthy diet.</p>	<p>RECEPTION</p> <p>To explore ideas by looking at pictures, film, models and real life examples. To verbally convey what they want to design and make. To draw pictures showing what they want to design and make. To choose from a variety of materials to make a product. To explore different tools and use them safely To explore different ways of joining materials e.g. glue, tape, stapling, sewing etc. To explore combining different materials. To begin to use a variety of tools and techniques increasingly independently - scissors, hole punch, stapler; e.g. cutting, sticking, stapling, hole punching To begin to join materials appropriately. To design and make a product. To name familiar foods.</p>	
<p>KEY STAGE 1:</p> <p>Design To design purposeful, functional, appealing products for themselves and other users based on design criteria To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p>	<p>YEAR 1</p> <p>DESIGN To explore pictures/models focusing on features and how they have been made To begin to develop ideas through talk and drawings To design by drawing a picture and begin to label with materials that you will use. To explain why materials are chosen. To explain verbally to a friend what they are going to make. To design by drawing a picture and label how you will join.</p>	<p>YEAR 2</p> <p>DESIGN To explore products to see how they have been made and how this can be used to make own design. To explore joining techniques such as slits, folds, flaps. To create a detailed design by drawing a picture and labelling the materials and tools that you will use and how they will be joined. To make templates and mock ups of ideas in card or paper or using ICT. To explain why materials are chosen by annotating. To explain verbally in greater depth what they are making. To discuss design with a friend and answer any questions about it.</p>



<p>Make To select from and use a range of tools and equipment to perform practical tasks for example, cutting, shaping, joining and finishing To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p>	<p>Textiles To develop sewing techniques using a range of different materials (before using needle and thread) such as card and hole punching, plastic weaving materials. To use a prepared template. To use a template to cut out fabric to make design. To join fabrics by using running stitch, glue, staples, over sewing. To develop a product by adding decoration with buttons, beads, ribbons and sequins, by joining with a glue gun (supervised) or sewing where appropriate.</p>	<p>Textiles To explore ways to colour fabrics using a range of techniques e.g. fabric paints, printing, painting. To design, make and use their own template. To explore ways of making and using more than one template at a time. To cut out shapes which have been created by drawing round a template onto the fabric. To join fabrics in different ways using stitching and become more proficient in sewing techniques. To develop a product by sewing on decoration such as buttons, beads, sequins, braids, ribbons.</p>
	<p>MATERIALS (paper and card) To fold, tear and cut paper and card To roll paper to create tubes To cut along lines, straight and curved To curl paper To use hole punch To insert paper fasteners for card linkages To use simple pop ups To identify and use materials to join e.g. split pins, masking tape, treasury tags. To explore moving mechanisms and design and make a moving picture with at least one moving mechanism (e.g. pop up)</p>	<p>MATERIALS (paper and card) To fold, tear and cut paper and card To roll paper to create tubes To cut along lines, straight and curved To curl paper To insert paper fasteners for card linkages To create hinges To investigate strengthening sheet materials To investigate and use joining techniques temporary, fixed and moving – slits, folds, flaps. To explore, design and make a moving picture which uses a combination of slider, levers and wheel mechanisms</p>
<p>Technical knowledge To build structures, exploring how they can be made stronger, stiffer and more stable To explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>	<p>CONSTRUCTION To begin to build structures, exploring how they can be made stronger, stiffer and more stable. To make vehicles with construction kits which contain free running wheels To use a range of materials to create models with levers and sliders To join appropriately for different materials and situations e.g. glue, tape,</p>	<p>CONSTRUCTION To build structures, exploring how they can be made stronger, stiffer and more stable. To make vehicles with construction kits which contain free running wheels To use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels. To attach wheels to a chassis using an axle</p>



Progression of Knowledge and Skills 2019



	To mark out materials to be cut using a template To see a glue gun used by an adult	To join appropriately for different materials and situations e.g. glue, tape, To mark out materials to be cut using a template To cut strip wood/dowel using hacksaw and bench hook (to use correct vocabulary to name and describe them) To use a glue gun supervised by an adult
Evaluate To explore and evaluate a range of existing products To evaluate their ideas and products against design criteria	EVALUATE To share product made with class and to say what went well and what could be done better/ differently next time.	EVALUATE To evaluate their products and ideas against design criteria To identify strengths and possible changes they might make to improve their products. To talk confidently about their ideas, saying what they like and dislike.
Cooking and Nutrition To use the basic principles of a healthy and varied diet to prepare dishes. To understand where food comes from.	COOKING AND NUTRITION To develop a food vocabulary using taste, smell, texture and feel To begin to group familiar food products e.g. fruit and vegetables into the five food groups (The Eat Well Plate) To know how to use techniques such as cut, peel, grate, chop a range of ingredients To know how to prepare simple dishes safely and hygienically, without using a heat source To understand the need for a variety of foods in a diet To measure and weigh food items, non-statutory measures e.g. spoons, cups To begin to understand that all food comes from plants or animals To explore where food comes from (food has to be farmed, grown elsewhere (e.g. home) or caught)	COOKING AND NUTRITION To use a food vocabulary using taste, smell, texture and feel To group familiar food products e.g. fruit and vegetables To demonstrate how to cut, peel, grate, chop a range of ingredients To prepare simple dishes safely and hygienically, without using a heat source To understand the need for a variety of foods in a diet To measure and weigh food items, non-statutory measures e.g. spoons, cups To understand that all food comes from plants or animals To know that food has to be farmed, grown elsewhere (e.g. home) or caught
National Curriculum Objectives	Design Technology	
KEY STAGE 2:	YEAR 3	YEAR 4

Autumn Term skills

Spring Term

Summer Term

Continuous Provision

If learning skills overlap, put an asterisk in the colour of the next term.



Progression of Knowledge and Skills 2019



<p>Design To use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or group To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately To select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>Evaluate To investigate and analyse a range of existing products To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. To understand how key events and individuals in design and</p>	<p>Design To start to generate ideas for an item, considering its purpose and the user/s. To start to order the main stages of making a product and establish criteria for a successful product.</p>	<p>Design To start to generate ideas, considering the purposes for which they are designing. To confidently make labelled drawings from different views showing specific features. To develop a clear idea of what has to be done, planning how to use equipment, materials and processes.</p>
	<p>Materials: To cut materials accurately and safely by selecting appropriate tools. To select appropriate joining techniques.</p>	<p>Materials: To measure and mark out to the nearest mm. To apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p>
	<p>Textiles: To start to measure, tape or pin, cut and join fabric with some accuracy. To understand the need for a seam allowance. To join textiles with appropriate stitching.</p>	<p>Textiles: To sew using a range of different stitches, to weave and knit. To demonstrate how to measure, tape or pin, cut and join fabric with some accuracy. To select the most appropriate techniques to decorate textiles</p>
	<p>Construction Electricals and electronics: Create series circuits.</p> <p>Computing: • Control and monitor models using software designed for this purpose.</p> <p>Construction: • Choose suitable techniques to construct products or to repair items.</p> <p>Mechanics: • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).</p>	<p>Construction Electricals and electronics: Create parallel circuits.</p> <p>Computing: • Control and monitor models using software designed for this purpose.</p> <p>Construction: • Strengthen materials using suitable techniques.</p> <p>Mechanics: • Use scientific knowledge to choose appropriate mechanisms for a product.</p>



Progression of Knowledge and Skills 2019



<p>technology have helped shape the world</p> <p>Technical knowledge To apply their understanding of how to strengthen, stiffen and reinforce more complex structures To understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] To understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] To apply their understanding of computing to program, monitor and control their products.</p> <p>Cooking and nutrition To understand and apply the principles of a healthy and varied diet To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques To understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<p>Food: To prepare ingredients hygienically using appropriate utensils. To measure accurately. To follow a simple recipe. To begin to use techniques such as slicing, mixing, spreading, kneading and baking to assemble or cook ingredients.</p>	<p>Food: To prepare ingredients hygienically using appropriate utensils. To measure ingredients to the nearest gram. To follow a recipe To know how to use techniques such as slicing, mixing, spreading, kneading and baking to assemble and cook ingredients (controlling the temperature of the oven or hob, if cooking).</p>
	YEAR 5	YEAR 6
	<p>Design To begin to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces</p>	<p>Design To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p>
	<p>Materials: To cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).</p>	<p>Materials: To show an understanding of the qualities of materials to choose appropriate tools to cut and shape (e.g. the nature of fabric may require sharper scissors than would be used to cut paper).</p>
	<p>Textiles: To create objects (such as a cushion) that employ a seam allowance. To join textiles with a combination of stitching techniques (e.g. back stitch for seams and running stitch to attach decoration).</p>	<p>Textiles: To use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).</p>
<p>Construction Electricals and electronics: • Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).</p> <p>Computing: Write code to control and monitor models or products.</p>	<p>Construction Electricals and electronics: • Create circuits using electronics kits that employ a number of components with increasing confidence.</p> <p>Computing: Write code to control and monitor models or products.</p> <p>Construction:</p>	

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	<p>Construction:</p> <ul style="list-style-type: none"> • Develop a range of practical skills to create products (e.g cutting, drilling and screwing, nailing, gluing, filling and sanding). <p>Mechanics:</p> <ul style="list-style-type: none"> • Convert rotary motion to linear using cams. 	<ul style="list-style-type: none"> • Develop a range of practical skills to create products. <p>Mechanics:</p> <ul style="list-style-type: none"> • Use innovative combinations of electronics (or computing) and mechanics in product designs
	<p>Evaluate</p> <p>To evaluate different products To create my own design criteria. To evaluate my own work against design criteria. to respond to the feedback of others. To investigate designers and how they have had an impact</p>	<p>Evaluate</p> <p>To create my own design criteria. To evaluate my own work against design criteria. To respond to the feedback of others. To investigate designers and how they have had an impact.</p>
	<p>Food:</p> <p>To understand the importance of correct storage and handling of ingredients (knowledge of micro-organisms). To demonstrate a range of baking and cooking techniques of predominantly savoury dishes.</p>	<p>Food:</p> <p>To measure accurately and calculate ratios of ingredients to scale up or down from recipe. To create and refine recipes, including ingredients, methods, cooking times and temperatures.</p>