

National Curriculum Aims and Objectives

Design:

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make:

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate:

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Cooking and Nutrition:

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

Technical knowledge:

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products

Autumn	Spring	Summer
<p>Textiles/Sheet Materials - Local crafter Zoe Wright</p> <p>Textiles:</p> <ul style="list-style-type: none"> · Colour fabrics using a range of techniques e.g. fabric paints, printing, painting. · Cut out shapes which have been created by drawing round a template onto the fabric. <p>Sheet Materials:</p> <ul style="list-style-type: none"> · Fold, tear and cut paper and card · Roll paper to create tubes · Cut along lines, straight and curved · Curl paper · Use a hole punch 	<p>Construction - Famous designer Anthony Gormely</p> <ul style="list-style-type: none"> · Use a range of materials to create models. · Observe a glue gun being used by an adult. · Talk about how structures can be made stronger. 	<p>Food - Famous chef Joe Wicks</p> <ul style="list-style-type: none"> · Develop a food vocabulary using taste, smell, texture and feel. · Group familiar food products e.g. fruit and vegetables. · Work safely and hygienically. · Understand the need for a variety of foods in a diet. · Understand where food comes from. · Work with an adult to make food following a simple recipe.
<p>Design: Developing, planning and communicating ideas</p> <ul style="list-style-type: none"> · Explain what they are making and which materials they are using. · Select materials from limited range that will meet the design criteria. · Select and name the tools needed to work the materials. 		<p>Evaluate: Evaluating processes and products</p> <ul style="list-style-type: none"> • Say what they like and do not like about items they have made and attempt to say why. • Talk about their designs as they develop and identify

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<p>Textiles/Sheet Materials - Local pop-up book engineer Robert Crowther</p> <p>Textiles: Join fabrics by using running stitch, glue, staples, over sewing, tape. Decorate fabrics with buttons, beads, sequins, braids, ribbons.</p> <p>Sheet Materials: Insert paper fasteners for card linkages. Create hinges. Use simple pop ups. Investigate strengthening sheet materials. Investigate joinings temporary, fixed and moving.</p>	<p>Construction - Famous designer William Morrison</p> <p>Attach wheels to a chassis using an axle. Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels. Join appropriately for different materials and situations e.g. glue, tape. Mark out materials to be cut using a template. Cut strip wood/dowel using hacksaw and bench hook. Investigate how structures can be made stronger, stiffer and more stable.</p>	<p>Food - Local chef Paul Ainsworth</p> <p>Cut, peel, grate, chop a range of ingredients. Work safely and hygienically. Understand the need for a variety of foods in a diet. Measure and weigh food items, non-statutory measures e.g. spoons, cups. Follow a recipe to make food with increasing independence.</p>
<p>Design: Developing, planning and communicating ideas Evaluate: Evaluating processes and products Use pictures and words to convey what they want to design and make. Select appropriate technique explaining First...Next...Last...</p>		<p>Evaluate: Evaluating processes and products Talk about their designs as they develop and identify good and bad points. Talk about changes made during the making process. Discuss how closely their finished products meet their design</p>

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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 groups
 generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make:

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
 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

Evaluate:

investigate and analyse a range of existing products
 evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
 understand how key events and individuals in design and technology have helped shape the world

Cooking and Nutrition:

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
 understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Technical knowledge:

apply their understanding of how to strengthen, stiffen and reinforce more complex structures
 understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
 understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
 apply their understanding of computing to program, monitor and control their products

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<p>Textiles/Sheet Materials - Famous designer William Morrison</p> <p>Textiles: Create a simple pattern. Understand the need for patterns.</p> <p>Sheet Materials: Cut slots. Cut internal shapes. Use lolly sticks/card to make levers and linkages. Create nets.</p>	<p>Construction - Local sculptor Barbara Hepworth</p> <p>Make structures more stable by giving them a wide base. Prototype frame and shell structures. Use glue gun with close supervision (one to one). Choose materials based on their functional properties and aesthetic qualities.</p>	<p>Food - Famous chef Jamie Oliver</p> <p>Develop sensory vocabulary/knowledge using, smell, taste, texture and feel. Follow instructions. Make healthy eating choices from and understanding of a balanced diet. Join and combine a range of ingredients e.g. snack foods. Work safely and hygienically. Prepare and cook a range of predominately savoury dishes using a range of cooking techniques. Understand seasonality and know where and how ingredients are grown and captured.</p>
<p>Design: Developing, planning and communicating ideas</p>	<p>Communicate their ideas through discussion</p>	<p>Evaluate: Evaluating processes and products</p>

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<p>Textiles/Sheet Materials - Famous designer Zandra Rhodes</p> <p>Textiles: Prototype a product using J cloths. Use appropriate decoration techniques e.g. applique (glued or simple stitches). Understand seam allowance. Join fabrics using running stitch, over sewing, back stitch. Explore fastenings and recreate some e.g. sew on buttons and make loops.</p> <p>Sheet Materials: Use linkages to make movement larger or more varied. Use and explore complex pop ups.</p>	<p>Construction - Famous crafter Antoni Gaudi</p> <p>Measure and mark square selection, strip and dowel accordingly to 1cm. Create shell or frame structures, strengthen frames with diagonal struts. Incorporate a circuit with bulb or buzzer into a model. Choose materials based on their functional properties and aesthetic qualities.</p>	<p>Food – Chef Paul Ainsworth</p> <p>Analyse the taste, texture, smell, and appearance of a range of foods. Measure and weigh ingredient appropriately. Prepare and cook a range of predominately savoury dishes using a range of cooking techniques. Make healthy eating choices from and understanding of a balanced diet. Understanding seasonality and know where and how ingredients are grown and captured.</p>
<p>Design: Developing planning and communicating ideas Propose realistic suggestions as to how they can achieve their Evaluate: Evaluating processes and products</p>		

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<p>Textiles/Sheet Materials - Local designer Tony Plant</p> <p>Textiles: Understand pattern layout. Decorate textiles appropriately often before joining components. Combine fabrics to create more useful properties.</p> <p>Sheet Materials: Cut slots Cut accurately and safely to a marked line. Join and combing materials with temporary, fixed or moving joinings. Choose an appropriate sheet material for the purpose.</p>	<p>Construction - Local sculptor Barbara Hepworth</p> <p>Use hand drill to drill tight and loose fit holes. Cut strip wood, dowel, square section wood accurately to 1mm. Join materials using appropriate methods. Incorporate motor and a switch into a model. Control a model using an ICT control programme. Use a cam to make an up and down mechanism. Use a glue gun with close supervision. Choose materials based on their functional properties and aesthetic qualities.</p>	<p>Food - Local chef Paul Ainsworth</p> <p>Select and prepare foods for a particular purpose. Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing. Weigh and measure using scales. Cut and shape ingredients using appropriate tools and equipment e.g. grating. Join and combine food ingredients appropriately e.g. beating, rubbing in. Work safely and hygienically Show awareness of a healthy diet from an understanding of a balanced diet Understand how to feed themselves and others affordably</p>

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<p>Textiles/Sheet Materials - Famous designer Coco Chanel</p> <p>Textiles: Create 3D products using pattern pieces and seam allowance. Pin and tack fabric pieces together. Join fabrics using over sewing, back stitch, blanket stitch or machine stitching. Make quality products.</p> <p>Sheet Materials: Use craft knife, cutting mat and safety ruler under one to one supervision.</p>	<p>Construction - Famous engineer Isambard Kingdom Brunel</p> <p>Use bradawl to mark hole positions. Build frameworks using a range of materials e.g. wood, card corrugated plastic to support mechanisms. Choose materials based on their functional properties and aesthetic qualities. Apply their understanding of how to strengthen, stiffen more complex structures. Understand and use mechanical systems in their products eg gears, pulleys, cams, levers and linkages.</p>	<p>Food - Famous chef Agnes Marshall</p> <p>Prepare food products taking into account the properties of ingredients and sensory characteristics. Understand how to feed themselves and others affordably now and in the future.</p>