

DT

Year 1

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 (DT Days - 20th & 21st October 2021)	Spring (DT Days - 16th & 17th February 2022)	Summer (DT Days - 25th & 26th May 2022)
<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. • Produce a mockup with kits or reclaimed materials. • Use drawings to record ideas as they are developed and talk about them. • Design a product for a given purpose. 		<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 good and bad points. • Talk about the changes made during the making process. • Explore and evaluate a range of existing products.

DT

Year 2

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 (DT Days - 20th & 21st October 2021)	Spring (DT Days - 16th & 17th February 2022)	Summer (DT Days - 25th & 26th May 2022)
<p>Textiles/Sheet Materials - Local crafter Deb Davidson</p> <p>Textiles:</p> <ul style="list-style-type: none"> • Join fabrics by using running stitch, glue, staples, over sewing, tape. • Decorate fabrics with buttons, beads, sequins, braids, ribbons. <p>Sheet Materials:</p> <ul style="list-style-type: none"> • Insert paper fasteners for card linkages. • Create hinges. • Use simple pop ups. • Investigate strengthening sheet materials. • Investigate joinings temporary, fixed and moving. 	<p>Construction - Famous designer William Morrison</p> <ul style="list-style-type: none"> • 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>Food - Local chef Paul Ainsworth</p> <ul style="list-style-type: none"> • 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>Design: Developing, planning and communicating ideas</p> <ul style="list-style-type: none"> • Use pictures and words to convey what they want to design and make. • Select appropriate technique explaining First...Next...Last... • Explore ideas by rearranging materials. • Describe their models and drawings of ideas and intentions. • Produce a mock up with kits/reclaimed materials or ICT. • Add notes to drawings to help explanations. • Design a product from a detailed design criteria. 		<p>Evaluate: Evaluating processes and products</p> <ul style="list-style-type: none"> • 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 criteria. • Explore and evaluate a range of existing products.

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Year 3

National Curriculum Aims and Objectives

Design:

- 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

Autumn (DT Days - 20th & 21st October 2021)	Spring (DT Days - 16th & 17th February 2022)	Summer (DT Days - 25th & 26th May 2022)
<p>Textiles/Sheet Materials - Famous designer William Morrison</p> <p>Textiles:</p> <ul style="list-style-type: none"> • Create a simple pattern. • Understand the need for patterns. <p>Sheet Materials:</p> <ul style="list-style-type: none"> • Cut slots. • Cut internal shapes. • Use lolly sticks/card to make levers and linkages. • Create nets. 	<p>Construction - Local sculptor Barbara Hepworth</p> <ul style="list-style-type: none"> • 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 asthetic qualities. 	<p>Food - Famous chef Jamie Oliver</p> <ul style="list-style-type: none"> • 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>Design: Developing, planning and communicating ideas</p> <ul style="list-style-type: none"> • Draw/sketch products to help analyse and understand how products are made. • Think ahead about the order of their work and decide upon tools and materials. • Record the plan by drawing (labelled sketches) or writing. 	<ul style="list-style-type: none"> • Communicate their ideas through discussion and add notes to drawings to help explanations. • Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups. 	<p>Evaluate: Evaluating processes and products</p> <ul style="list-style-type: none"> • Identify the strengths and weaknesses of their design ideas. • Decide which design idea to develop. • Consider and explain how the finished product could be improved. • Investigate and analyse a range of existing products.

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Year 4

National Curriculum Aims and Objectives

Design:

- 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

Autumn (DT Days - 20th & 21st October 2021)	Spring (DT Days - 16th & 17th February 2022)	Summer (DT Days - 25th & 26th May 2022)
<p>Textiles/Sheet Materials - Famous designer Zandra Rhodes</p> <p>Textiles:</p> <ul style="list-style-type: none"> • 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>Sheet Materials:</p> <ul style="list-style-type: none"> • Use linkages to make movement larger or more varied. • Use and explore complex pop ups. 	<p>Construction - Famous crafter Will Kirk</p> <ul style="list-style-type: none"> • 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 aestic qualities. 	<p>Food - Local chef Paul Ainsworth</p> <ul style="list-style-type: none"> • 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>Design: Developing, planning and communicating ideas</p> <ul style="list-style-type: none"> • Investigate similar products to the one to be made to produce own design criteria. • Plan a sequence of actions to make a product. • Develop more than one design or adaptation of an initial design. 	<ul style="list-style-type: none"> • Propose realistic suggestions as to how they can achieve their design. • Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups. • Produce annotated sketches. • Make prototypes. 	<p>Evaluate: Evaluating processes and products</p> <ul style="list-style-type: none"> • Discuss how well the finished product meets the design criteria and how well it meets the needs of the user. • Investigate and analyse a range of existing products.

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Year 5

National Curriculum Aims and Objectives

Design:

- 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

Autumn (DT Days - 20th & 21st October 2021)			Spring (DT Days - 16th & 17th February 2022)			Summer (DT Days - 25th & 26th May 2022)		
Textiles/Sheet Materials - Local designer Tony Plant			Construction - Local sculptor Barbara Hepworth			Food - Local chef Paul Ainsworth		
Textiles:			• Use hand drill to drill tight and loose fit holes.			• Select and prepare foods for a particular purpose.		
• Understand pattern layout.			• Cut strip wood, dowel, square section wood accurately to 1mm.			• Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing.		
• Decorate textiles appropriately often before joining components.			• Join materials using appropriate methods.			• Weigh and measure using scales.		
• Combine fabrics to create more useful properties.			• Incorporate motor and a switch into a model.			• Cut and shape ingredients using appropriate tools and equipment e.g. grating.		
Sheet Materials:			• Control a model using an ICT control programme.			• Join and combine food ingredients appropriately e.g. beating, rubbing in.		
• Cut slots			• Use a cam to make an up and down mechanism.			• Work safely and hygienically		
• Cut accurately and safely to a marked line.			• Use a glue gun with close supervision.			• Show awareness of a healthy diet from an understanding of a balanced diet		
• Join and combining materials with temporary, fixed or moving joinings.			• Choose materials based on their functional properties and aesthetic qualities.			• Understand how to feed themselves and others affordably now and in the future		
• Choose an appropriate sheet material for the purpose.								
Design: Developing, planning and communicating ideas			• Use models, kits and drawings to help formulate design ideas.			Evaluate: Evaluating processes and products		
• Combine modelling and drawing to refine ideas.			• Make prototypes.			• Use the design criteria to inform their decisions about ways to proceed.		
• Investigate products/images to collect ideas and create own design criteria.			• Use found information to inform decisions.			• Make suggestions as how their or others designs could be improved.		
• Plan the sequence of work using a storyboard.						• Justify their decisions about materials and methods of construction.		
• Sketch and model alternative ideas.						• Investigate and analyse a range of existing products.		
• Record ideas using annotated diagrams.						• Identify what does and does not work in the product.		
• Develop one idea in depth								

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Year 6

National Curriculum Aims and Objectives

Design:

- 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

Autumn (DT Days - 20th & 21st October 2021)	Spring (DT Days - 16th & 17th February 2022)	Summer (DT Days - 25th & 26th May 2022)
<p>Textiles/Sheet Materials - Famous designer Coco Chanel</p> <p>Textiles:</p> <ul style="list-style-type: none"> • 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>Sheet Materials:</p> <ul style="list-style-type: none"> • Use craft knife, cutting mat and safety ruler under one to one supervision. 	<p>Construction - Famous engineer Isambard Kingdom Brunel</p> <ul style="list-style-type: none"> • 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>Food - Famous chef Agnes Marshall</p> <ul style="list-style-type: none"> • 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.

Design: Developing, planning and communicating ideas

- Investigate products/images to collect ideas and create own design criteria.
 - Sketch and model alternative ideas.
 - Develop one idea in depth.
 - Combine modelling and drawing to refine ideas.
- Record ideas using annotated diagrams.
 - Draw plans which can be read/followed by someone else.
 - Use models, kits and drawings to help formulate ideas.
 - Give a report using correct technical vocabulary.
 - Make prototypes.
 - Design innovative, functional, appealing products that are fit for purpose
 - Use found information to inform decisions that are aimed at particular individuals or groups.
 - Use a computer aided design to model ideas.
 - When designing produced patterned pieces.
 - Draw plans which can be read/followed by someone else.

Evaluate: Evaluating processes and products

- Reflect on their work using design criteria stating how well the design fits the needs of the user.
- Investigate and analyse a range of existing products.