



Design Technology

Key Stage 1 Cycle A	DT specific Vocabulary: Plan, design, model, make, evaluate, sliders, levers, freestanding, structure, criteria, parts, mechanism Focus Vocabulary: Healthy, hygiene, cut, chop, peel, mix, grate, stir, join, materials, properties, build, prepare, smoothie, salad, shape, mark out, labelled. (NB: many properties of materials will be taught in science)	National Curriculum reference Children should study: Key Stage 1 Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. Focus: - To explore and use mechanisms. - How to use the basic principles of a healthy and varied diet to prepare dishes - How to build structures, exploring how they can be made stronger, stiffer and more stable																														
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Design Technology

Key Stage 1 Cycle B	DT specific Vocabulary: Plan, design, model, make, evaluate, Sliders, levers, freestanding, structure, criteria, parts, mechanism, template, textile Focus Vocabulary: Healthy, hygiene, cut, chop, peel, mix, grate, stir, join, materials, properties, build, prepare, smoothie, salad, shape, mark out, labelled. (NB: many properties of materials will be taught in Science)	National Curriculum reference Children should study: Key Stage 1 Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. Focus: - To explore and use mechanisms. - How to use the basic principles of a healthy and varied diet to prepare dishes 3-D textiles product can be assembled from two identical fabric shapes																								
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Design Technology



Lower Key Stage 2 Cycle A	DT specific Vocabulary: Research, linkage, shell structure, mock up, mechanisms, systems, inventors, designers, products, pneumatics, pressure, inflate, deflate, input, output, pump Focus Vocabulary: pattern, annotated, knead, dough, prove, fairtrade, combine, electrical, functional, appearance, motor, syringe, dome, hollow, nets	National Curriculum reference Children should study: Key Stage 2 Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. Focus: - 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] - prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques																							
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Design Technology

Lower Stage 2 Cycle B

DT specific Vocabulary: Research, linkage, shell structure, mock up, mechanisms, systems, inventors, designers, products, pneumatics, pressure, inflate, deflate, input, output, pump

Focus Vocabulary: pattern, annotated, knead, dough, prove, fairtrade, combine, electrical, functional, appearance, motor, syringe

National Curriculum
reference

Children should study:

Key Stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

FOCUS

- To understand and use mechanical systems in their products.
- To understand and use electrical systems in their products.
- To use cutting and shaping techniques and materials, including textiles to turn 2D shapes into 3D products.

"We study DT at the Meadows to become designers of the future and to learn how to be risk takers, resourceful, innovative and enterprising."

For each task in design technology, children will have opportunities to plan, design, make and evaluate:

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Mechanisms	Food	Electrical Systems	Textile
Pneumatics Moving historical character linked to History		Simple circuits and switches Lighting up! Linked to Geography	2-D shape to 3-D product Bag/purse linked to art
Knowledge to be developed throughout the year			
Autumn Term		Spring Term	Summer Term
• That pneumatic systems create movement. • That pneumatic system is a system that uses compressed air to transmit and control energy.		• How to make manually controlled, simple series circuits with batteries and different types of switches and bulbs that are fit for purpose.	• How fabric can be used in different ways. • To know how to cut and shape fabric. • To know how to join fabric, including stitches.

Design Technology



Upper Key Stage 2 Cycle A	DT specific Vocabulary: aesthetics, Cams, gears, pulleys, rotary, design specification, prototype, linear Focus Vocabulary: Entrepreneurs, Culture, seasonality, aroma, adapted, innovative	National Curriculum reference									
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Focus:
- understand and use mechanical systems in their products - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. - apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Design Technology

Upper Key Stage 2 Cycle B	DT specific Vocabulary: aesthetics, Cams, gears, pulleys, rotary, design specification, prototype, linear Focus Vocabulary: Entrepreneurs, Culture, seasonality, aroma, adapted, innovative, cross stitch, back stitch, blanket stitch, running stitch, tacking stitch.	National Curriculum reference Children should study: <u>Key Stage 2</u> Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. Focus: - understand and use mechanical systems in their products - apply their understanding of computing to program, monitor and control their products. - 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.																								
"We study DT at the Meadows to become designers of the future and to learn how to be risk takers, resourceful, innovative and enterprising."	For each task in design technology, children will have opportunities to plan, design, make and evaluate: <table><tr><th>Planning and designing</th><th>Making and evaluating</th></tr><tr><td> - carry out research, using surveys, interviews, questionnaires and web-based resources. - identify the needs, wants, preferences and values of particular individuals and groups - develop a simple design specification to guide their thinking. - generate innovative ideas, drawing on research - make design decisions, taking account of constraints such as time, resources and cost. - use computer-aided design to develop and communicate their ideas - produce appropriate lists of tools, equipment and materials that they need - formulate step-by-step plans as a guide to making </td><td> - accurately measure, mark out, cut and shape materials and components - accurately assemble, join and combine materials and components - accurately apply a range of finishing techniques, including those from art and design - use techniques that involve a number of steps - demonstrate resourcefulness when tackling practical problems - critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make - evaluate their ideas and products against their original design specification. </td></tr></table> <table><tr><th>Mechanisms</th><th>Electrical Systems</th><th>Structures</th><th>Textile</th></tr><tr><td>Cams Moving propaganda linked to History</td><td>Monitoring and control Alarm system linked to geography</td><td></td><td>Combining different fabric shapes (including computer-aided design) Slippers/Clothes linked to art</td></tr><tr><td colspan="4">Knowledge to be developed throughout the year</td></tr><tr><th>Autumn Term</th><th>Spring Term</th><th></th><th>Summer Term</th></tr><tr><td> - That mechanical systems such as cams create movement. - How changing the shape of the cam changes the movement of the follower. </td><td> - That a computer control program can enable their electrical product to respond to changes in the environment. </td><td></td><td> - That a textile product can be made from a combination of fabric shapes. - That materials can be combined and mixed to create more useful characteristics. - That choice of fabric requires different handling. </td></tr></table>	Planning and designing	Making and evaluating	- carry out research, using surveys, interviews, questionnaires and web-based resources. - identify the needs, wants, preferences and values of particular individuals and groups - develop a simple design specification to guide their thinking. - generate innovative ideas, drawing on research - make design decisions, taking account of constraints such as time, resources and cost. - use computer-aided design to develop and communicate their ideas - produce appropriate lists of tools, equipment and materials that they need - formulate step-by-step plans as a guide to making	- accurately measure, mark out, cut and shape materials and components - accurately assemble, join and combine materials and components - accurately apply a range of finishing techniques, including those from art and design - use techniques that involve a number of steps - demonstrate resourcefulness when tackling practical problems - critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make - evaluate their ideas and products against their original design specification.	Mechanisms	Electrical Systems	Structures	Textile	Cams Moving propaganda linked to History	Monitoring and control Alarm system linked to geography		Combining different fabric shapes (including computer-aided design) Slippers/Clothes linked to art	Knowledge to be developed throughout the year				Autumn Term	Spring Term		Summer Term	- That mechanical systems such as cams create movement. - How changing the shape of the cam changes the movement of the follower.	That a computer control program can enable their electrical product to respond to changes in the environment.		- That a textile product can be made from a combination of fabric shapes. - That materials can be combined and mixed to create more useful characteristics. - That choice of fabric requires different handling.	
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