

Aldwyn Primary School - Design and Technology Overview



Nursery

Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

Expressive Arts and Design Creating with Materials

3- and 4- year olds

- Explore different materials freely, to develop their ideas about how to use them and what to make.
- Develop their own ideas and then decide which materials to use to express them.
- Join different materials and explore different textures.
- Create closed shapes with continuous lines and begin to use these shapes to represent objects.
- Draw with increasing complexity and detail, such as representing a face with a circle and including details.
- Use drawing to represent ideas like movement or loud noises.
- Show different motions in their drawings and paintings, like happiness, sadness, fear etc.
- Explore colour and colour mixing.

Reception

Autumn 1

Autumn 2

Spring 1

Spring 2

Summer 1

Summer 2

Expressive Arts and Design

- Explore, use and refine a variety of artistic effects to express ideas and feelings
- Return to and build on their previous learning, refining ideas and developing their ability to represent them
- Create collaboratively, sharing ideas, resources and skills
- ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- ELG: Creating with materials> Share their creations, explaining the process they have used

Personal, Social and Emotional Development

- Know and talk about the different factors that support their overall health and wellbeing: healthy eating
- ELG: Managing self> Manage their own basic hygiene and personal needs, including... understanding the importance of healthy food choices

Communication and Language

- Learn new vocabulary
- Use new vocabulary throughout the day
- Articulate their ideas and thoughts in well-formed sentences
- Connect one idea or action to another using a range of connectives
- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen
- ELG: Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary
- ELG: Speaking> Offer explanations for why things might happen

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Understanding the World

- Explore the natural world around them
- ELG: The Natural World>Explore the natural world around them, making observations and drawing pictures of animals and plants

Physical Development

- Develop small motor skills so that they can use a range of tools competently, safely and confidently
- ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery

Year 1

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Mechanisms Wheels and Axles	Textiles Puppets		Mechanisms Making a Moving Story Book		Fruit and Vegetables Smoothies
<ul style="list-style-type: none"> • 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 • Select from and use a range of tools and equipment to perform practical tasks [for example, 	<ul style="list-style-type: none"> • 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 • Select from and use a range of tools and equipment to perform practical tasks [for example, 		<ul style="list-style-type: none"> • 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 • Select from and use a range of tools and equipment to perform practical tasks [for example, 		<ul style="list-style-type: none"> • 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 • Explore and evaluate a range of existing products

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<p>cutting, shaping, joining and finishing]</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • Explore and evaluate a range of existing products • Evaluate their ideas and products against design criteria • Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 	<p>cutting, shaping, joining and finishing]</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • Evaluate their ideas and products against design criteria 		<p>cutting, shaping, joining and finishing]</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • Explore and evaluate a range of existing products • Evaluate their ideas and products against design criteria • Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 		<ul style="list-style-type: none"> • Use basic principles of a healthy and varied diet to prepare dishes • Understand where food comes from
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Year 2

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Structures Baby Bear's Chair		Food A Balanced Diet		Mechanisms Fairground Wheel	Textiles Pouches
<ul style="list-style-type: none"> 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 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 		<ul style="list-style-type: none"> Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Explore and evaluate a range of existing products Use basic principles of a healthy and varied diet to prepare dishes Understand where food comes from 		<ul style="list-style-type: none"> 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 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 	<ul style="list-style-type: none"> 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 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

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<p>materials, textiles and ingredients, according to their characteristics</p> <ul style="list-style-type: none">• Evaluate their ideas and products against design criteria• Build structures, exploring how they can be made stronger, stiffer and more stable				<p>materials, textiles and ingredients, according to their characteristics</p> <ul style="list-style-type: none">• Explore and evaluate a range of existing products• Evaluate their ideas and products against design criteria• 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.	<p>materials, textiles and ingredients, according to their characteristics</p> <ul style="list-style-type: none">• Explore and evaluate a range of existing products• Evaluate their ideas and products against design criteria
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Year 3

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Food Eating Seasonally		Pneumatic Toy Cracking Contraptions	Textiles Cross-Stitch and Applique		Structures Local History Building
<ul style="list-style-type: none"> • 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 • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • Understand and apply principles of a healthy and varied diet • Prepare and cook variety of predominantly savoury dishes using a 		<ul style="list-style-type: none"> • 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 • Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, 	<ul style="list-style-type: none"> • 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 • Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, 		<ul style="list-style-type: none"> • 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 • Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping,

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<p>range of cooking techniques</p> <ul style="list-style-type: none"> • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 		<p>joining and finishing], accurately</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • 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 • Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] 	<p>joining and finishing], accurately</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work 		<p>joining and finishing], accurately</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • 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 • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
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Year 4

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Electrical Systems Torches		Food Adapt a Recipe	Textiles Design a Cushion	Structure Pavilions
	<ul style="list-style-type: none"> 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 computeraided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, 		<ul style="list-style-type: none"> 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 Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics 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 	<ul style="list-style-type: none"> 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 	<ul style="list-style-type: none"> 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 computeraided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping,

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	<p>joining and finishing], accurately</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • 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 • Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] 		<ul style="list-style-type: none"> • Understand and apply principles of a healthy and varied diet • Prepare and cook 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 	<ul style="list-style-type: none"> • 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 • 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 	<p>joining and finishing], accurately</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics • 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 • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
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Year 5

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Textiles Fastenings	Mechanical Systems Pop-Up Book	Food What Could Be Healthier?		Structure Bridges	
<ul style="list-style-type: none"> 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 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 wide range of 	<ul style="list-style-type: none"> 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, 	<ul style="list-style-type: none"> 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 Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional 		<ul style="list-style-type: none"> 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 	

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<p>materials and components, including construction materials, textiles and ingredients, according to their characteristics</p> <ul style="list-style-type: none"> • 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 	<p>joining and finishing], accurately</p> <ul style="list-style-type: none"> • 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 • 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 and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] 	<p>properties and aesthetic qualities</p> <ul style="list-style-type: none"> • Understand how key events and individuals in design and technology have helped shape the world • Understand and apply principles of a healthy and varied diet • Prepare and cook 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 		<ul style="list-style-type: none"> • 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 • 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 • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	
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Year 6					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Digital World: Navigating the World	Structures Playground	Food Come Dine With Me	Textiles Waistcoats	Mechanical Systems Automata Toys	Electrical Systems Steady Hand Game
<ul style="list-style-type: none"> 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, 	<ul style="list-style-type: none"> 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, 	<ul style="list-style-type: none"> 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 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 Understand how key events and individuals in design and technology have helped shape the world 	<ul style="list-style-type: none"> 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, 	<ul style="list-style-type: none"> 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 	<ul style="list-style-type: none"> 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 Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

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<p>shaping, joining and finishing], accurately</p> <ul style="list-style-type: none"> • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • Apply their understanding of computing to program, monitor and control their products 	<p>cutting, shaping, joining and finishing], 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 accurately</p> <ul style="list-style-type: none"> • 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 Apply their understanding of how to strengthen, stiffen and reinforce more complex structures improve their work 	<ul style="list-style-type: none"> • Understand and apply principles of a healthy and varied diet • Prepare and cook 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 	<p>joining and finishing], accurately</p> <ul style="list-style-type: none"> • 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 • 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 	<p>tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <ul style="list-style-type: none"> • 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 • Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] 	<ul style="list-style-type: none"> • 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 • 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 • Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
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