



Curriculum Mapping and Progression Document

**Design and
Technology**

Vision for DT

Our aim is to provide children with a DT education that is relevant in our rapidly changing world and a curriculum that embodies our school intent: we intend to provide a wide range of inclusive opportunities, that ensure our children have a secure body of knowledge and effective critical thinking skills, which enable them to lead life with the highest of aspirations and contribute to life in modern Britain and the global community

Our DT Curriculum Will Enable Pupils to:

- **Conduct research and look at similar models.**
- **Research and find out about designers, chefs, engineers**
- **Acquire skills of cutting, making, constructing, gluing and making**
- **Create detailed designs with annotations for products they will make**
- **Review designs and create final designs**
- **Evaluate their products**
- **Develop their knowledge of products and designers**
- **Consider the impact of products on the environment**
- **Explore audience, purpose and function**
- **Understand the importance of aesthetics when designing products**
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Intent

At Guardian Angels, we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. In addition to this, children are given the opportunity to explore the work of well-known individuals to inspire and influence the design in their work. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers.

DT in the Early Years Foundation Stage

The foundations of our DT curriculum begin in EYFS where our children explore and learn through a balance of pupil initiated investigation and adult led learning. Our EYFS class focuses on high quality interactions and a language rich environment preparing every pupil for transition into Year 1 and the National Curriculum.

EYFS	Development Matters 3&4 Years will learn to:	Development Matters Children in Reception will learn to:	Statutory Framework Early Learning Goals
Personal, Social and Emotional Development	Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.		
Physical Development	Use large-muscle movements to wave flags and streamers, paint and make marks. Choose the right resources to carry out their own plan. Use one-handed tools and equipment, for example, making snips in paper with scissors.	Progress towards a more fluent style of moving, with developing control and grace. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor	Use a range of small tools, including scissors, paintbrushes and cutlery.

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EYFS	Development Matters 3&4 Years will learn to:	Development Matters Children in Reception will learn to:	Statutory Framework Early Learning Goals
Understanding the World	Explore how things work.		
Expressive Arts and Design	<p>Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</p> <p>Explore different materials freely, in order to develop their ideas about how to use them and what to make.</p> <p>Develop their own ideas and then decide which materials to use to express them.</p> <p>Create closed shapes with continuous lines, and begin to use these shapes to represent objects</p>	<p>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</p> <p>Return to and build on their previous learning, refining ideas and developing their ability to represent them.</p> <p>Create collaboratively, sharing ideas, resources and skills</p>	<p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Share their creations, explaining the process they have used.</p>

Key Stage 1 DT and the National Curriculum

Year Group	Autumn	Spring	Summer
<p>Year 1 National Curriculum Coverage</p>	<p><u>Cooking and Nutrition</u></p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity.</p> <p>Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>In Key Stage 1 pupils should be taught to:</p> <ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from. 	<p><u>Mechanics and Movement</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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 and mock ups.</p> <p>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, according to their characteristics.</p> <p>Evaluate— explore and evaluate a range of existing products, evaluate their ideas and products against design criteria.</p> <p>Technical knowledge—build structures exploring how they can be made stronger, stiffer and more stable, explore and use mechanisms, (for example wheels and axles) in their products</p>	<p><u>Building</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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 and mock ups.</p> <p>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, according to their characteristics.</p> <p>Evaluate— explore and evaluate a range of existing products, evaluate their ideas and products against design criteria.</p> <p>Technical knowledge—build structures exploring how they can be made stronger, stiffer and more stable, explore and use mechanisms, (for example levers and sliders) in their products</p>
<p>Year 1 Theme and Topic</p>	<p><u>Cooking and Nutrition</u> <u>Chop, Slice, Mash</u></p> <p>This project teaches children about sources of food and the preparatory skills of peeling, tearing, slicing, chopping, mashing and grating. They use this knowledge and techniques to design and make a supermarket sandwich according to specific design criteria.</p>	<p><u>Mechanics and Movement</u> <u>Taxi</u></p> <p>This project teaches children about wheels, axles and chassis and how they work together to make a vehicle move.</p>	<p><u>Building</u> <u>Shade and Shelter</u></p> <p>This project teaches children about the purpose of shelters and their materials. They name and describe shelters and design and make shelter prototypes. Children then design and build a play den as a group and evaluate their completed product.</p>

Key Stage 1 DT and the National Curriculum

Year Group	Autumn	Spring	Summer
<p>Year 2 National Curriculum Coverage</p>	<p><u>Cooking and Nutrition</u></p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity.</p> <p>Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>In Key Stage 1 pupils should be taught to:</p> <ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from. 	<p><u>Mechanics and Movement</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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 and mock ups.</p> <p>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, according to their characteristics.</p> <p>Evaluate— explore and evaluate a range of existing products, evaluate their ideas and products against design criteria.</p> <p>Technical knowledge—build structures exploring how they can be made stronger, stiffer and more stable, explore and use mechanisms, (for example wheels and axles) in their products</p>	<p><u>Sewing</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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 and templates.</p> <p>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 textiles, according to their characteristics.</p> <p>Evaluate— explore and evaluate a range of existing products, evaluate their ideas and products against design criteria.</p>
<p>Year 2 Theme and Topic</p>	<p><u>Cooking and Nutrition Remarkable Recipes</u></p> <p>This project teaches children about sources of food and tools used for food preparation. They also discover why some foods are cooked and learn to read a simple recipe. The children choose and make a new school meal that fulfils specific design criteria.</p>	<p><u>Building Beach Hut</u></p> <p>This project teaches children about making and strengthening structures, including different ways of joining materials.</p>	<p><u>Sewing Cut, Stitch, join</u></p> <p>This project teaches children about fabric home products and the significant British brand Cath Kidston. They learn about sewing patterns and using a running stitch and embellishments before making a sewn bag tag..</p>

Key Stage 2 DT and the National Curriculum

Year Group	Autumn	Spring	Summer
<p>Year 3 National Curriculum Coverage</p>	<p style="text-align: center;"><u>Cooking and Nutrition</u></p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity.</p> <p>Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>In Key Stage 2 pupils should be taught to:</p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of dishes using a range of cooking techniques • know where and how a variety of ingredients are grown, reared, caught and processed 	<p style="text-align: center;"><u>Building</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school, leisure, enterprise). When designing and making, pupils should be taught to:</p> <p>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, exploded diagrams.</p> <p>Make—select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing; select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities.</p> <p>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.</p> <p>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). Understand and use electrical systems in their products, for example, series circuits incorporating switches, bulbs, buzzers and motors.</p>	<p style="text-align: center;"><u>Mechanics and Movement</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school, leisure, enterprise). When designing and making, pupils should be taught to:</p> <p>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, exploded diagrams.</p> <p>Make—select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing; select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities.</p> <p>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.</p> <p>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). Understand and use electrical systems in their products, for example, series circuits incorporating switches, bulbs, buzzers and motors.</p>
<p>Year 3 Theme and Topic</p>	<p style="text-align: center;"><u>Cooking and Nutrition</u> <u>Cook Well, Eat Well</u></p> <p>This project teaches children about food groups and the Eatwell guide. They learn about methods of cooking and explore these by cooking potatoes and ratatouille. The children choose and make a taco filling according to specific design criteria.</p>	<p style="text-align: center;"><u>Building</u> <u>Greenhouse</u></p> <p>This project teaches children about the purpose, structure and design features of greenhouses, and compares the work of two significant greenhouse designers. They learn techniques to strengthen structures and use tools safely. They use their learning to design and construct a mini greenhouse.</p>	<p style="text-align: center;"><u>Mechanics and Movement</u> <u>Making it Move</u></p> <p>This project teaches children about cam mechanisms. They experiment with different shaped cams before designing, making and evaluating a child's automaton toy.</p>

Key Stage 2 DT and the National Curriculum

Year Group	Autumn	Spring	Summer
<p>Year 4 National Curriculum Coverage</p>	<p style="text-align: center;"><u>Sewing</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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, pattern pieces</p> <p>Make—select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing; select from and use a wider range of materials and components, including textiles, according to their functional properties and aesthetic qualities.</p> <p>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.</p>	<p style="text-align: center;"><u>Cooking and Nutrition</u></p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity.</p> <p>Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>In Key Stage 2 pupils should be taught to:</p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of dishes using a range of cooking techniques • know where and how a variety of ingredients are grown, reared, caught and processed 	<p style="text-align: center;"><u>Building</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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, prototypes.</p> <p>Make—select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing; select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities.</p> <p>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.</p> <p>Technical knowledge - apply their understanding of how to strengthen, stiffen and reinforce more complex structures; understand and use mechanical systems in their products</p>
<p>Year 4 Theme and Topic</p>	<p style="text-align: center;"><u>Sewing</u> <u>Functional and Fancy Fabrics</u></p> <p>This project teaches children about home furnishings and the significant designer William Morris. They learn techniques for decorating fabric, including block printing, hemming and embroidery and use them to design and make a fabric sample.</p>	<p style="text-align: center;"><u>Cooking and Nutrition</u> <u>Fresh Food, Good Food</u></p> <p>This project teaches children about food decay and preservation. They discover key inventions in food preservation and packaging, then make examples. The children prepare, package and evaluate a healthy snack.</p>	<p style="text-align: center;"><u>Building</u> <u>Builders</u></p> <p>This project teaches children about simple machines, including wheels, axles, inclined planes, pulleys and levers, exploring how they helped ancient builders to lift and move heavy loads.</p>

Key Stage 2 DT and the National Curriculum

Year Group	Autumn	Spring	Summer
<p>Year 5 National Curriculum Coverage</p>	<p><u>Mechanics and Movement</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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 diagrams.</p> <p>Make—select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing; select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities.</p> <p>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.</p> <p>Technical knowledge - apply their understanding of how to strengthen, stiffen and reinforce more complex structures; understand and use mechanical systems in their products</p>	<p><u>Cooking and Nutrition</u></p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity.</p> <p>Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>In Key Stage 2 pupils should be taught to:</p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of dishes using a range of cooking techniques • know where and how a variety of ingredients are grown, reared, caught and processed 	<p><u>Building</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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, prototypes.</p> <p>Make—select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing; select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities.</p> <p>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.</p> <p>Technical knowledge - apply their understanding of how to strengthen, stiffen and reinforce more complex structures; understand and use mechanical systems in their products</p>
<p>Year 5 Theme and Topic</p>	<p><u>Mechanics and Movement</u> <u>Moving Mechanisms</u></p> <p>This project teaches children about pneumatic systems. They experiment with pneumatics before designing, making and evaluating a pneumatic machine that performs a useful function..</p>	<p><u>Cooking and Nutrition</u> <u>Eat the Season</u></p> <p>This project teaches children about the meaning and benefits of seasonal eating, including food preparation and cooking techniques.</p>	<p><u>Building</u> <u>Architecture</u></p> <p>This project teaches children about how architectural style and technology has developed over time and then use this knowledge to design a building with specific features.</p>

Key Stage 2 DT and the National Curriculum

Year Group	Autumn	Spring	Summer
<p>Year 6 National Curriculum Coverage</p>	<p style="text-align: center;"><u>Building</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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, prototypes.</p> <p>Make—select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing; select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities.</p> <p>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.</p> <p>Technical knowledge - apply their understanding of how to strengthen, stiffen and reinforce more complex structures; understand and use mechanical systems in their products</p>	<p style="text-align: center;"><u>Cooking and Nutrition</u></p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity.</p> <p>Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>In Key Stage 2 pupils should be taught to:</p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of dishes using a range of cooking techniques • know where and how a variety of ingredients are grown, reared, caught and processed 	<p style="text-align: center;"><u>Sewing</u></p> <p>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.</p> <p>They should work in a range of relevant contexts (for example, the home, school). When designing and making, pupils should be taught to:</p> <p>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, pattern pieces</p> <p>Make—select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing; select from and use a wider range of materials and components, including textiles, according to their functional properties and aesthetic qualities.</p> <p>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.</p>
<p>Year 6 Theme and Topic</p>	<p style="text-align: center;"><u>Building Engineer</u></p> <p>This project teaches children about remarkable engineers and significant bridges, learning to identify features, such as beams, arches and trusses. They complete a bridge-building engineering challenge to create a bridge prototype.</p>	<p style="text-align: center;"><u>Cooking and Nutrition Food for Life</u></p> <p>This project teaches children about processed food and healthy food choices. They make bread and pasta sauces and learn about the benefits of whole foods. They plan and make meals as part of a healthy daily menu, and evaluate their completed products.</p>	<p style="text-align: center;"><u>Sewing Make Do and Mend</u></p> <p>This project teaches children a range of simple sewing stitches, including ways of recycling and repurposing old clothes and materials.</p>