



## Adlington St Paul's Long-Term Plan 2024-25

### Subject: Design and Technology (D&T)



	Autumn 1		Autumn 2			Spring 1	Spring 2	Summer 1		Summer 2
<b>Reception</b>	<b>Me and My Community</b>		<b>Once Upon A Time</b>			<b>Starry Night Driver: Understanding the World</b>	<b>Dangerous Dinosaurs Driver: Understanding the World</b>	<b>Sunshine and Sunflowers Driver: Understanding the World</b>		<b>Big Wide World Driver: Understanding the World</b>
	<b>Frame It</b>	<b>Emergency Vehicles</b>	<b>Make a mask</b>	<b>Building Bridges</b>	<b>Royal Workshop</b>	<b>Make a Cuddle Pet</b>		<b>Crop Protectors</b>	<b>Sun Hats</b>	<b>Animal Masks</b>
<b>Skills</b>	Cut, tear, fold and stick a range of papers and fabrics.	Explore, build and play with a range of resources and construction kits with wheels and axles.	Cut, tear, fold and stick a range of papers and fabrics.	Construct simple structures and models using a range of materials	Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences.	Select appropriate materials when constructing and making.		Explore significant products	Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences.	Construct simple structures and models using a range of materials
<b>Final Product</b>	Make a picture frame	Build a vehicle	Make a fairy-tale mask	Make a bridge	Make swords, shields and jewellery	Make a sock puppet		Make a CD mobile	Make a sun hat	Create an animal mask
<b>Mini Project</b>	<b>Exploring Autumn</b>		<b>Sparkle and Shine</b>			<b>Winter Wonderland</b>	<b>Puddles and Rainbows</b>	<b>Shadows and Reflections</b>		<b>Splash</b>

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	Autumn Playdough	Bright Lights		Rainmakers		Floating and Sinking
Skills	Manipulate malleable materials into a variety of shapes and forms using their hands and other simple tools.	Cut, tear, fold and stick a range of papers and fabrics.		Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences.		Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences.
Year 1	<b>Autumn Term Childhood</b>		<b>Spring Term Bright Lights, Big City</b>		<b>Summer Term School Days</b>	
Project	Shade and Shelter		Big Buses		Street View	
Knowledge	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.		This project teaches children about wheels, axles and chassis and how they work together to make a vehicle move.		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.	
Skills	<ul style="list-style-type: none"> <li>Construct simple structures, models or other products using a range of materials.</li> <li>Select and use a range of materials, beginning to explain their choices.</li> </ul>		<ul style="list-style-type: none"> <li>Use wheels and axles to make a simple moving model.</li> </ul>		<ul style="list-style-type: none"> <li>Select the appropriate tool for a simple practical task.</li> </ul>	

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	<ul style="list-style-type: none"> <li>Describe the similarities and differences between two products.</li> <li>Name and explore a range of everyday products and describe how they are used.</li> <li>Identify strengths and weaknesses of their own and others work.</li> <li>Follow the rules to keep safe during a practical task.</li> </ul>	<ul style="list-style-type: none"> <li>Describe the similarities and differences between two products.</li> <li>Name and explore a range of everyday products and describe how they are used.</li> <li>Follow the rules to keep safe during a practical task.</li> </ul>	<ul style="list-style-type: none"> <li>Explain why hand washing and cleanliness are important.</li> <li>Measure and weigh food items using non-standard measures, such as spoons and cups.</li> <li>Select healthy ingredients for a fruit or vegetable salad.</li> <li>Follow the rules to keep safe during a practical task.</li> </ul>	
<b>Final Product</b>	Play Den	Moving Bus	Supermarket Sandwich	
<b>Year 2</b>	<b>Movers and Shakers</b>	<b>Coastline</b>	<b>Magnificent Monarchs</b>	
<b>Project</b>	Remarkable Recipes	Beach huts	Push and Pull	Cut, Stitch and Join
<b>Knowledge</b>	This project teaches children about sources of food and tools used for food preparation. They also discover why some foods are cooked. They learn to read a simple recipe. The children choose and make a new school meal that fulfils specific design criteria.	This project teaches children about making and strengthening structures, including different ways of joining materials.	This project teaches children about three types of mechanism: sliders, levers and linkages. They make models of each mechanism before designing and making a greetings card with a moving part.	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.

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<b>Skills</b>	<ul style="list-style-type: none"> <li>Select the appropriate tool for a task and explain their choice. View progression</li> <li>Prepare ingredients by peeling, grating, chopping and slicing.</li> <li>Identify the origin of some common foods.</li> <li>A healthy diet should include meat or fish, starchy foods, some dairy foods, a small amount of fat and plenty of fruit and vegetables.</li> <li>Work safely and hygienically in construction and cooking activities.</li> </ul>	<ul style="list-style-type: none"> <li>Generate and communicate their ideas through a range of different methods.</li> <li>Select the appropriate tool for a task and explain their choice.</li> <li>Explore how a structure can be made stronger, stiffer and more stable.</li> <li>Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and use mechanisms (for example, levers, sliders, wheels and axles), in their products.</li> <li>Explain how an everyday product could be improved.</li> <li>Explain how closely their finished product meets their design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>Generate and communicate their ideas through a range of different methods.</li> <li>Select the appropriate tool for a task and explain their choice.</li> <li>Use different methods of joining fabrics, including glue and running stitch.</li> <li>Properties of components and materials determine how they can and cannot be used.</li> <li>Explain why a designer/ inventor is important.</li> <li>Understand embellishment is a decorative detail or feature</li> </ul>
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				<p>added to something to make it more attractive.</p> <ul style="list-style-type: none"> <li>• Identify home products made from fabric.</li> <li>• Explain how closely their finished product meets their design criteria.</li> </ul>
<b>Final Product</b>	New School Meal	Beach Hut	Greeting card with a moving part	Bag Tag
<b>Year 3</b>	<b>Through the Ages</b>	<b>Rocks, Relics and Rumbles</b>	<b>Emperors and Empires</b>	
<b>Project</b>	Cook Well, Eatwell	Making it Move	Greenhouse	
<b>Knowledge</b>	This project teaches children about food groups and the Eat well 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	This project teaches children about cam mechanisms. They experiment with different shaped cams before designing, making and evaluating a child's automaton toy.	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.	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use appliances safely with adult supervision.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and use mechanical systems in their</li> </ul>	<ul style="list-style-type: none"> <li>• Generate, develop, model and communicate ideas through discussion.</li> </ul>	

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	<ul style="list-style-type: none"> <li>• Generate, develop, model and communicate ideas through discussion.</li> <li>• Preparation techniques for savoury dishes include peeling, chopping, deseeding, slicing, dicing, grating, mixing and skinning.</li> <li>• Evaluate their ideas and products against their design criteria.</li> <li>• Understand how key events and individuals have shaped the world.</li> <li>• Understand seasonality and know how and where a variety of ingredients are grown, reared, caught and processed.</li> </ul>	<p>products (for example, gears, pulleys, cams, levers and linkages).</p> <ul style="list-style-type: none"> <li>• Generate, develop, model and communicate ideas through discussion.</li> <li>• Select and use a wide range of tools and equipment to perform practical tasks, for example: cutting, joining, shaping and finishing.</li> <li>• Use a range of materials for purpose.</li> <li>• Investigate and analyse a range of existing products.</li> <li>• Evaluate their ideas and products against their design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Select and use a wide range of tools and equipment to perform practical tasks, for example: cutting, joining, shaping and finishing.</li> <li>• Use a range of materials for purpose.</li> <li>• Investigate and analyse a range of existing products.             <ul style="list-style-type: none"> <li>• Evaluate their ideas and products against their design criteria.</li> </ul> </li> <li>• Understand how key events and individuals have shaped the world.</li> <li>• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</li> </ul>
<b>Final Product</b>	Taco Filling	A child's automaton toy	A Mini Greenhouse
<b>Year 4</b>	<b>Invasion</b>	<b>Misty mountain, Winding River</b>	<b>Ancient Civilisations</b>
<b>Project</b>	Fresh food good food	Functional and Fancy Fabrics	Tomb Builders
<b>Knowledge</b>	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.	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.	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.

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<b>Skills</b>	<ul style="list-style-type: none"> <li>• Generate, develop, model and communicate ideas through discussion.</li> <li>• Select and use a wide range of tools and equipment to perform practical tasks, for example: cutting, joining, shaping and finishing.</li> <li>• Use a range of materials for purpose.</li> <li>• Investigate and analyse a range of existing products.               <ul style="list-style-type: none"> <li>• Evaluate their ideas and products against their design criteria.</li> </ul> </li> <li>• Understand how key events and individuals have shaped the world.               <ul style="list-style-type: none"> <li>• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</li> </ul> </li> <li>• Understand seasonality and know how and where a variety of ingredients are grown, reared, caught and processed.</li> <li>• Preparation and cook predominantly savoury dishes using a range of cooking techniques.</li> </ul>	<ul style="list-style-type: none"> <li>• Generate, develop, model and communicate ideas through discussion.</li> <li>• Select and use a wide range of tools and equipment to perform practical tasks, for example: cutting, joining, shaping and finishing.</li> <li>• Select from and use materials and components - textiles.</li> <li>• Investigate and analyse a range of existing products.               <ul style="list-style-type: none"> <li>• Evaluate their ideas and products against their design criteria.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Generate, develop, model and communicate ideas through discussion.</li> <li>• Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products.               <ul style="list-style-type: none"> <li>• Select from and use materials and components – constructions materials.</li> <li>• Evaluate their ideas and products against their design criteria.</li> </ul> </li> </ul>
<b>Final product</b>	Healthy packaged snack	Fabric samples	Machine proto-type
<b>Year 5</b>	<b>Dynamic Dynasties</b>	<b>Sew, Grow and Farm</b>	<b>Ground-breaking Greeks</b>
<b>Project</b>	Moving mechanisms	Eat the Seasons	Architecture
<b>Knowledge</b>	This project teaches children about pneumatic systems. They experiment with pneumatics before designing, making and evaluating a pneumatic machine that performs a useful function.	This project teaches children about the meaning and benefits of seasonal eating, including food preparation and cooking techniques.	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.

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<b>Skills</b>	<ul style="list-style-type: none"> <li>Use mechanical systems in their products, such as pneumatics.</li> <li>Test and evaluate products against a detailed design specification and make adaptations as they develop the product.</li> <li>Select and use a wide range of tools and equipment to perform practical tasks, for example: cutting, joining, shaping and finishing.</li> <li>Use a range of materials for purpose.               <ul style="list-style-type: none"> <li>Evaluate their ideas and products against their design criteria.</li> </ul> </li> <li>Understand how key events and individuals have shaped the world.               <ul style="list-style-type: none"> <li>Apply their understanding on how to strengthen, stiffen and reinforce more complex structures.</li> </ul> </li> <li>Critique, evaluate and test their ideas and products and the work of others.</li> </ul>	<ul style="list-style-type: none"> <li>Understand and apply the principles of a healthy varied diet.</li> <li>Use an increasing range of preparation and cooking techniques to cook predominantly savoury dishes - dicing, peeling, grating.</li> <li>Understand seasonality and know how and where a variety of ingredients are grown, reared, caught and processed.</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through discussion.</li> <li>Select and use a wide range of tools and equipment to perform practical tasks, for example: cutting, joining, shaping and finishing.</li> <li>Use a range of materials for purpose.               <ul style="list-style-type: none"> <li>Evaluate their ideas and products against their design criteria.</li> <li>Apply their understanding on how to strengthen, stiffen and reinforce more complex structures.                   <ul style="list-style-type: none"> <li>Build a framework using a range of materials to support mechanisms.</li> </ul> </li> <li>Support, stiffness and stability can be created by using triangular shapes to create strong frameworks, columns to support roofs and overlapping brickwork patterns.</li> </ul> </li> </ul>
<b>Final product</b>	Pneumatic prototype	Soup	Greek building
<b>Year 6</b>	<b>Maafa</b>	<b>Frozen Kingdoms</b>	<b>Britain at War</b>
<b>Project</b>	Food for Life	Engineers	Make Do and Mend
<b>Knowledge</b>	This project teaches children about significant black artists and their work, and provides opportunities to analyse and create artwork inspired by them.	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.	This project teaches children a range of simple sewing stitches, including ways of recycling and repurposing old clothes and materials.

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<b>Skills</b>	<ul style="list-style-type: none"> <li>Investigate and analyse a range of existing products.</li> <li>Follow a recipe that requires a variety of techniques and source the necessary ingredients independently.</li> <li>Plan a healthy daily diet, justifying why each meal contributes towards a balanced diet.</li> <li>Preparation techniques, such as chopping, slicing, dicing, kneading and mashing, and cooking techniques, such as boiling, roasting, frying and baking.</li> <li>Understand seasonality and know how and where a variety of ingredients are grown, reared, caught and processed.</li> <li>Evaluate their ideas and products against their design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through discussion.</li> <li>Use a range of materials for purpose.</li> <li>Select and use a wide range of tools and equipment.</li> <li>Investigate and analyse a range of existing products.</li> <li>Apply their understanding on how to strengthen, stiffen and reinforce more complex structures – using appropriate materials and frameworks.</li> <li>Understand how key events and individuals have shaped the world.</li> </ul>	<ul style="list-style-type: none"> <li>Select and use a wide range of tools and equipment and use them safely and precisely.</li> <li>Techniques could be used: hand stitches include running stitch, blanket stitch and whip stitch. Pin and tack fabrics in preparation for sewing and more complex pattern work.</li> <li>Use different methods of fastening for function and decoration, including press studs, Velcro and buttons.</li> <li>Use a range of materials for purpose.</li> </ul>
<b>Final product</b>	Healthy Meal	Bridge Prototype	Bunting

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