

## Langley Park Primary Academy Design & Technology Progression Map

DT	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>Nursery</b>	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.
<b>Reception</b>						
<b>Year 1</b>	<p>Mechanisms Transdisciplinary</p> <p>Can they make a product which moves?</p> <p>Can they cut materials using scissors?</p> <p>Can they describe the materials using different words?</p> <p>Can they say why they have chosen moving parts?</p> <p>Construction Transdisciplinary</p> <p>Can they talk with others about how they want to construct their product?</p> <p>Can they select appropriate resources and tools for their building projects?</p> <p>Can they make simple plans before making objects, e.g. drawings, arranging pieces of construction before building?</p> <p>Use of materials Transdisciplinary</p> <p>Can they make a structure/model using different materials?</p> <p>Is their work tidy?</p> <p>Can they make their model stronger if it needs to be</p>	<p>Cooking and nutrition transdisciplinary</p> <p>Making and cooking gingerbread men, using prediction. Can they cut food safely?</p> <p>Can they describe the texture of foods?</p> <p>Do they wash their hands and make sure that surfaces are clean?</p> <p>Can they think of interesting ways of decorating food they have made, eg, cakes?</p>	<p>Mechanisms Transdisciplinary</p> <p>Can they make a product which moves?</p> <p>Can they cut materials using scissors?</p> <p>Can they describe the materials using different words?</p> <p>Can they say why they have chosen moving parts?</p> <p>Construction Transdisciplinary</p> <p>Can they talk with others about how they want to construct their product?</p> <p>Can they select appropriate resources and tools for their building projects?</p> <p>Can they make simple plans before making objects, e.g. drawings, arranging pieces of construction before building?</p> <p>Use of materials Transdisciplinary</p> <p>Can they make a structure/model using different materials?</p> <p>Is their work tidy?</p> <p>Can they make their model stronger if it needs to be</p>		<p>Cooking and nutrition transdisciplinary</p> <p>Can they cut food safely? Can they describe the texture of foods? Do they wash their hands and make sure that surfaces are clean? Can they think of interesting ways of decorating food they have made, eg, cakes?</p> <p>Textiles Disciplinary</p> <p>Can they describe how different textiles feel?</p> <p>Can they make a product from textiles by gluing?</p>	
<b>Year 2</b>				<p>Developing, Planning and Communicating Ideas- design and review, Construction - choosing suitable materials</p> <p>Working with tools, equipment, materials and components to make quality products join things (materials/ components) together in different ways</p>	<p>Developing, Planning and Communicating Ideas- Can they think of ideas and plan what to do next? Can they choose the best tools and materials? Can they give a reason why these are best? Evaluating processes and products - Can they explain what went well with their work?</p> <p>If they did it again, can they explain what they would improve? Cooking and nutrition - Can they describe the properties of the ingredients they are using? Can they explain what it means to be hygienic? Are they hygienic in the kitchen? Pupils should be taught to use the basic principles of a healthy and varied diet to prepare dishes. Pupils should be taught to understand where food comes from. Use of Materials - Can they measure materials to use in a model or structure? Can they join material in different ways? Can they use joining, folding or rolling to make it stronger? Construction - Can they make sensible choices as to which material to use for their constructions? Can they develop their own ideas from initial starting points? Create their own houses from cardboard/ wood and set alight (links to science of materials going through irreversible changes. Bake their own bread and looking at healthy eating - what food would have been like in the past - hygiene compared to then.</p>	<p>Mechanisms - Can they join materials together as part of a moving product? Can they add some kind of design to their product?</p>

Year 3	generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	Mouldable materials select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately	Developing, planning and communicating ideas, cooking 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	Developing, planning and communicating ideas 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, such as 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	Working with tools Evaluating products joining textiles Stiff and flexible materials 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, such as cutting, shaping, joining and finishing, accurately *select from and use a wider range of materials, textiles and ingredients, according to their functional properties and aesthetic qualities	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, such as 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
Year 4		Electrical and Mechanical Components	Working With Tools, Equipment, materials and components.	Developing Planning and Communicating Ideas, Stiff and Flexible Materials, Mouldable Materials	Textiles	Cooking and Nutrition
Year 5	Mouldable materials * Are they motivated enough to refine and improve their product? * Do they persevere through different stages of the making process?	Working with tools, equipment, materials and components to make quality products * Can they explain why their finished product is going to be of good quality? * Can they explain how their product will appeal to the audience?	Electrical and mechanical components Working with tools, equipment, materials and components to make quality products * Can they explain why their finished product is going to be of good quality? * Can they explain how their product will appeal to the audience? * Can they use a range of tools and equipment expertly? * Can they refine their product after testing it? Stiff and flexible sheet materials * Are their measurements accurate enough to ensure that everything is precise? * How have they ensured that their product is strong and fit for purpose? Mouldable materials * Are they motivated enough to refine and improve their product? * Do they persevere through different stages of the making process?	Textiles * Do they think what the user would want when choosing textiles? * How have they made their product attractive and strong? * Can they make up a prototype first? * Can they use a range of joining techniques?	* Cooking and Nutrition Can they describe what they do to be both hygienic and safe? Do they keep checking that their design is the best it can be? * Do they check whether anything could be improved? * Can they evaluate appearance and function against the original criteria? * How have they presented their product well?	Can they use a range of tools and equipment expertly? * Can they incorporate a switch into their product? * Can they refine their product after testing it? * Can they incorporate hydraulics and pneumatics?
Year 6	DEVELOPING, PLANNING, COMMUNICATING IDEAS Can they use a range of information to inform their design? Can they use market research to inform plans? Can they work within constraints? Can they follow and refine their plan if necessary? Can they justify their plan to someone else? Do they consider culture and society in their designs? EVALUATING PROCESS AND PRODUCTS How well do they test and evaluate their final product? Is it fit for purpose?	HOW WELL DO THEY TEST AND EVALUATE THEIR FINAL PRODUCTS? IS IT FIT FOR PURPOSE What would improve it? Would different resources have improved their product? Would they need more or different information to make it even better? Does their product meet all design criteria? Did they consider the use of the product when selecting materials?	WORKING WITH TOOLS, EQUIPMENT, MATERIALS AND COMPONENTS TO MAKE QUALITY PRODUCTS Can they use tools and materials precisely? Do they change the way they are working if needed? Creating pop art designs, printing them onto T shirts, using transfer paper and an iron, then potentially selling them as a part of their product.	"ELECTRICAL AND MECHANICAL COMPONENTS Can they use different kinds of circuit in their product? Can they think of ways in which adding a circuit would improve their product?"		"DEVELOPING, PLANNING, COMMUNICATING IDEAS Can they use a range of information to inform their design? Can they use market research to inform plans? Can they work within constraints? Can they follow and refine their plan if necessary? Can they justify their plan to someone else? Do they consider culture and society in their designs? EVALUATING PROCESS AND PRODUCTS How well do they test and evaluate their final product? Is it fit for purpose? HOW WELL DO THEY TEST AND EVALUATE THEIR FINAL PRODUCTS? IS IT FIT FOR PURPOSE What would improve it? Would different resources have improved their product? Would they need more or different information to make it even better? Does their product meet all design criteria? Did they consider the use of the product when selecting materials? WORKING WITH TOOLS, EQUIPMENT, MATERIALS AND COMPONENTS TO MAKE QUALITY PRODUCTS Can they use tools and materials precisely? Do they change the way they are working if needed? Creating pop art designs, printing them onto T shirts, using transfer paper and an iron, then potentially selling them as a part of their product."