

Lunsford Primary School Design and Technology Progression

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Designing (Generating ideas and understanding contexts, uses and purposes)	ELG's * Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. * Children use what they have learnt about media and materials in original ways, thinking about uses and purposes.	National Curriculum. Pupils should be taught to: * Design – Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas. * 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. * Evaluate – Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. * Technical knowledge – Build structures exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms. * Cooking and nutrition – Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.		National Curriculum. Pupils should be taught to: * 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. * 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. * Evaluate – Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider views of others to improve their work. Understand how key events and individuals in design and technology have helped shape the world. * Technical Knowledge – Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems and electrical systems in their products. * Cooking and nutrition – 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. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.			
	* Talk with children about where they can see models and plans in the environment. * Support children in thinking about what they want to make, the processes that may be involved and the materials and resources they might need. * Constructs with a purpose in mind, using a variety of resources.	* State what product they are designing and making. * Know whether a product is for themselves or others. * Describe what their product is for and how it will work. * Begin to explore how they will make it appropriate for an intended user. * Generate ideas from experiences. * Develop and communicate ideas by talking/drawing. * Explore materials, construction and templates. * Use information and communication technology where appropriate.	* State what product they are designing and making. * Know whether a product is for themselves or others. * Describe what their product is for and how it will work. * Explain how they will make it appropriate for an intended user. * Use simple design criteria to develop ideas. * Generate ideas from experiences. * Develop and communicate ideas by talking/drawing. * Explore materials, construction and templates. * Use information and communication technology where appropriate.	* Gather information about the needs and wants of particular individuals/groups. * Begin to indicate the design features of their products * Begin to explain how parts of their product work. * Develop own design criteria and use these for ideas. * Share and clarify ideas through discussion. * Model ideas using prototypes and pattern pieces. * Draw annotated sketches, cross-sectional drawings and diagrams to explain ideas.	* Research design ideas. * Begin to work across a range of contexts i.e. home, school etc. * Describe the purpose of their product * Indicate the design features * Explain the intended users * Explain how parts of their product work. * Share and clarify ideas through discussion, modelling using prototypes and pattern pieces. * Draw annotated sketches, cross-sectional drawings and diagrams, and computer aided designs.	* Carry out research for designs * Identify the needs, wants, preferences and values of individuals/groups. * Describe the purpose of their product * Indicate the design features * Explain the intended users * Explain how parts of their product work. * Generate innovative ideas, drawing on research. * Draw annotated sketches, cross-sectional drawings and diagrams, and computer aided designs.	* Develop a simple design specification to guide their thinking. * Recognise when their products have to fulfil certain requirements. * Make design decisions, taking account of time, resources and cost. * Draw annotated sketches, cross-sectional drawings and diagrams, and computer aided designs.

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Making (Planning)	<ul style="list-style-type: none"> * Construct with a purpose in mind, using a variety of resources. 	<ul style="list-style-type: none"> * Select from a range of tools and equipment explaining their choice. * Select from materials/components based on characteristics i.e. strong, bendy 	<ul style="list-style-type: none"> * Select from a range of tools and equipment explaining their choice. * Select from materials/components based on characteristics i.e. strong, bendy 	<ul style="list-style-type: none"> * Select tools and equipment that suit the task. * Explain choice of tools/equipment. 	<ul style="list-style-type: none"> * Select tools and equipment carefully based on specifications of task. * Explain choice of tools/equipment in relation to techniques/skills they will be using. 	<ul style="list-style-type: none"> * Explain choice of materials/component based on function and aesthetics. * Consider order of making i.e. first to last * Make lists of things they will need i.e. tools, equipment, materials. 	<ul style="list-style-type: none"> * Explain choice of materials/component based on function and aesthetics. * Consider order of making i.e. first to last * Make detailed lists of things they will need and what they will be used for i.e. tools, equipment, materials.
Making (Skills/techniques)	<ul style="list-style-type: none"> * Join construction pieces together to build and balance. • Selects tools and techniques needed to shape, assemble and join materials they are using * Begin to try out a range of tools and techniques safely. * Demonstrate and teach skills and techniques associated with the things children are doing, for example, show them how to stop the paint from dripping or how to balance bricks so that they will not fall down. 	<ul style="list-style-type: none"> * Assemble, join and combine materials/components. * Use fixing materials i.e. glue, staples, tape, paper clips. 	<ul style="list-style-type: none"> * Use and make own templates/design * Measure, mark and cut materials/components for use. * Use fixing materials i.e. glue, staples, tape, paper clips. 	<ul style="list-style-type: none"> * Use wider range of tools/components * Measure, mark and cut out materials with more accuracy. 	<ul style="list-style-type: none"> * Use wider range of tools/components * Measure, mark and cut out materials with more accuracy. * Assemble, join and combine materials with accuracy. 	<ul style="list-style-type: none"> * Use wider range of tools/components including mechanical/electrical. * Accurately measure materials and components * Accurately assemble, join and combine materials/components. 	<ul style="list-style-type: none"> * Use wider range of tools/components including mechanical/electrical. * Use techniques involving steps. * Make refinements.

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluate (Own ideas/products)	<ul style="list-style-type: none"> * Keep children's models and works for a period so children can enjoy, develop, or refer to. * Selects appropriate resources and adapts work where necessary. 	<ul style="list-style-type: none"> * Talk about their design ideas and what they want to make. * Make judgements about their products/ideas against design criteria. 	<ul style="list-style-type: none"> * Give ways their product could be improved next time. * Evaluate use of materials/components. 	<ul style="list-style-type: none"> * Identify strengths/weaknesses of their ideas/product. * Consider other people's views and how they could improve their work. * Refer back to design criteria. * Use design criteria to evaluate completed products. 	<ul style="list-style-type: none"> * Identify strengths/weaknesses of their ideas/product. * Consider other people's views and how they could improve their work. * Refer back to design criteria. * Use design criteria to evaluate completed products. 	<ul style="list-style-type: none"> * Critically evaluate the quality of the design. * Explore how well the product fits the purpose as they design and make. 	<ul style="list-style-type: none"> * Critically evaluate the quality of design, manufacture and how well the product fits the purpose as they design and make. * Compare their ideas and products to their original design specifications.
Evaluate (Existing products)		<ul style="list-style-type: none"> * Explore what products are, who they are for, how they are made and the materials used. 	<ul style="list-style-type: none"> * Explore what products are, who they are for, how they are made and the materials used. 	<ul style="list-style-type: none"> * Investigate how well products have been designed, why they've been made, materials chosen and methods of construction. * Explore how well products work, how they achieve their purpose and meet user needs. * Identify great designers and research their work. 	<ul style="list-style-type: none"> * Investigate who designed and made the products, where they were made, when they were designed. * Explore if products can be recycled/reused and why. * Identify great designers and research their work. 	<ul style="list-style-type: none"> * Investigate how much products cost to make, innovative products and how sustainable the materials are. * Identify great designers and research their work. Use this to influence their work. 	<ul style="list-style-type: none"> * Investigate how much products cost to make, innovative products and how sustainable the materials are. * Identify great designers and research their work. Use this to influence their work.
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical knowledge (Making products work)	<ul style="list-style-type: none"> * Investigate various construction materials. * Construct with a purpose in mind, using a variety of resources. 	<ul style="list-style-type: none"> * Understand about the characteristics of materials/components. * Understand about the movement of simple mechanisms i.e. levers, sliders. * Understand how structures can be made stronger, stiffer and more stable. 	<ul style="list-style-type: none"> * Understand about the characteristics of materials/components. * Understand about the movement of simple mechanisms i.e. levers, sliders, wheels, axels. * Understand technical vocabulary * Understand how structures can be made stronger, stiffer and more stable. 	<ul style="list-style-type: none"> * Understand how mechanical systems create movements. * Understand how simple electrical systems are used to make products. * Use correct technical vocabulary. * Understand how to make strong, stiff structures. 	<ul style="list-style-type: none"> * Understand how mechanical systems create movements. * Understand how simple electrical systems are used to make products. * Use correct technical vocabulary. * Understand how to make strong, stiff structures. 	<ul style="list-style-type: none"> * Understand how cams, pulleys and gears create movement. * Understand how more complex electrical circuits/components make functional products. * Understand that computers are used to control products. 	<ul style="list-style-type: none"> * Understand how cams, pulleys and gears create movement. * Understand how more complex electrical circuits/components make functional products. * Understand that computers are used to control products.

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cooking and Nutrition (Where food comes from)	<ul style="list-style-type: none"> * Begin to recognize that food comes from plants/animals. * Begin to understand what being healthy means. 	<ul style="list-style-type: none"> * To know where certain foods come from. * Develop understanding that we should eat 5 portions of fruit/veg a day for a healthy, balanced diet. 	<ul style="list-style-type: none"> * To know where certain foods come from. * Develop understanding that we should eat 5 portions of fruit/veg a day for a healthy, balanced diet. 	<ul style="list-style-type: none"> * Know that food is grown, reared and caught in the UK, Europe and wider world. * Know that a healthy diet is made up from a variety and balance of different food types (the eatwell plate) 	<ul style="list-style-type: none"> * Know that food is grown, reared and caught in the UK, Europe and wider world. * Know that a healthy diet is made up from a variety and balance of different food types (the eatwell plate) * Know that to be active and healthy, food and drink is needed to provide energy for the body. 	<ul style="list-style-type: none"> * Know that seasons can affect the food available. * Understand how food is processed into ingredients that are eaten or used in cooking. 	<ul style="list-style-type: none"> * Know that seasons can affect the food available. * Understand how food is processed into ingredients that are eaten or used in cooking.
Cooking and Nutrition (food preparation)	<ul style="list-style-type: none"> * Begin to prepare dishes and learn cooking techniques i.e. chopping, cutting. 	<ul style="list-style-type: none"> * Prepare simple dishes safely and hygienically. * Use techniques such as cutting, peeling, chopping. 	<ul style="list-style-type: none"> * Begin to use appropriate equipment to weigh and measure ingredients. * Prepare simple dishes safely and hygienically. * Use techniques such as cutting, peeling, chopping. 	<ul style="list-style-type: none"> * Learn how to prepare and cook a variety of savoury dishes safely and hygienically, including where appropriate using a heat source. * Explore using a range of techniques i.e. grating, mixing, spreading, kneading, baking. 	<ul style="list-style-type: none"> * Learn how to prepare and cook a variety of savoury dishes safely and hygienically, including where appropriate using a heat source. * Explore using a range of techniques i.e. grating, mixing, spreading, kneading, baking. * Measure using grams. * Begin to follow a recipe. 	<ul style="list-style-type: none"> * Learn how to prepare and cook a variety of savoury dishes safely and hygienically, including where appropriate using a heat source. * Explore using a range of techniques i.e. grating, mixing, spreading, kneading, baking. * Know that recipes can be adapted. * Know that different foods contain substances i.e. nutrients, fibre etc. 	<ul style="list-style-type: none"> * Learn how to prepare and cook a variety of savoury dishes safely and hygienically, including where appropriate using a heat source. * Explore using a range of techniques i.e. grating, mixing, spreading, kneading, baking. * Understand the need to correct storage and why. * Measure ingredients accurately. * Begin to work out ratios for recipes.

Area of Study						
	Autumn		Spring		Summer	
Year 1						
Year 2						
Year 3						
Year 4						
Year 5						
Year 6						