



Sequencing and Progression Subject: Design Technology

INTENT	At Long Mead community Primary School we aspire to be outstanding with a curriculum that enables every child to achieve their best academically and socially. Every child is given the best opportunities to be the best version of themselves.
Design Technology Intent	Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world.
Scheme/planning used and reason for use:	Throughout the school, we follow the National Curriculum as a basis for our planning. This is planned on a two-year rolling basis to ensure coverage of the curriculum and no repetition within year groups of topics. As many links to the topics the children are studying are made as possible, not making tenuous links. Our progression document, as well as QCA documents are used to support with planning, coverage and progression of skills and knowledge. Within EYFS the development matters document is used and our progression document shows how areas within Expressive art and design then progress into KS1. Throughout our medium term planning reading, writing and maths opportunities are also highlighted and planned for, with the same high expectations as they would during these core subjects.
Adaptions made to scheme, including within classrooms and reasons for this:	Using the Weaving, Knowledge, Skills and Understanding progression document lessons are adapted to support and challenge within mixed age classes. All children take part in all aspects of the DT curriculum. Adaptions will be made to ensure all children can assess the learning within their year group – this is throughout the pillars of excellence. (Modelling, scaffolding, feedback, questioning and differentiation)
Day to day practice: (Frequency, what will be seen within lessons, pillars of excellence)	DT is taught throughout the school. It is taught twice a year. Either weekly or as a block. All children will cover the areas within their year groups' progression of knowledge and skills by the end of the year. Skills and knowledge are revisited each lesson based.
How we will be developing long term memory within this subject: (Knowledge acquisition and vocabulary)	Discussions take place each session based on the skills and knowledge that the children are learning – linked to the progression document. A homework 'menu' is also designed linked to the children's topic to consolidate learning and promote this within the family.

Progression

<u>Developing, planning and communicating ideas</u>	
EYFS	<p>30-50 Build up vocabulary that reflects the breadth of their experiences. (CL – Speaking).</p> <p>40-60 Use talk to organise, sequence and clarify thinking, ideas, feelings and events.(CL – Speaking).</p>
	<p>ELG Express themselves effectively, showing awareness of the listeners’ needs. Develop their own narratives and explanations by connecting ideas or events. (CL – Speaking).</p>
Year 1	<p>Can they think of some ideas of their own? Can they explain what they want to do?</p> <p>Can they use pictures and words to plan?</p>
Year 2	<p>Can they think of ideas and plan what to do next?</p> <p>Can they choose the best tools and materials? Can they give a reason why these are best?</p> <p>Can they describe their design by using pictures, diagrams, models and words?</p>
Year 3	<p>Can they show that their design meets a range of requirements?</p> <p>Can they put together a step-by-step plan which shows the order and also what equipment and tools they need?</p> <p>Can they describe their design using an accurately labelled sketch and words?</p> <p>How realistic is their plan?</p>
Year 4	<p>Can they come up with at least one idea about how to create their product?</p> <p>Do they take account of the ideas of others when designing? Can they produce a plan and explain it to others?</p> <p>Can they suggest some improvements and say what was good and not so good about their original design?</p>
Year 5	<p>Can they come up with a range of ideas after they have collected information?</p> <p>Do they take a user’s view into account when designing? Can they produce a detailed step-by-step plan?</p> <p>Can they suggest some alternative plans and say what the good points and drawbacks are about each?</p>
Year 6	<p>Can they use a range of information to inform their design? Can they use market research to inform plans?</p> <p>Can they work within constraints?</p> <p>Can they follow and refine their plan if necessary? Can they justify their plan to someone else?</p> <p>Do they consider culture and society in their designs?</p>

Working with tools, equipment, materials and components to make quality products

EYFS	<p>30-50 Use one handed tools and equipment. (PD – Moving and handling). Join construction pieces to build and balance. (Media and Materials).</p> <p>40-60 Handle tools, objects, construction and malleable materials safely and with increasing control.(PD – Moving an handling). Use tools and techniques to shape and assemble materials. (Media and Materials).</p> <p>ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture and function. (Media and Materials).</p>
Year 1	<p>Can they explain what they are making? Can they explain which tools are they using?</p>
Year 2	<p>Can they join things (materials/ components) together in different ways?</p>
Year 3	<p>Can they use equipment and tools accurately?</p>

Year 4	<p>Can they tell if their finished product is going to be good quality? Are they conscience of the need to produce something that will be liked by others? Can they show a good level of expertise when using a range of tools and equipment? Do they work at their product even though their original idea might not have worked?</p>
Year 5	<p>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? Do they persevere through different stages of the making process?</p>
Year 6	<p>Can they use tools and materials precisely? Do they change the way they are working if needed?</p>

Evaluating processes and products

EYFS	<p>30-50 Build up vocabulary that reflects the breadth of their experiences. (CL – Speaking).</p> <p>40-60 Use talk to organise, sequence and clarify thinking, ideas, feelings and events.(CL – Speaking).</p> <p>ELG Express themselves effectively, showing awareness of the listeners’ needs. Develop their own naratives and explanations by connecting ideas or events. (CL – Speaking). Children follow instructions involving several ideas or actions. They answer ‘how’ and ‘why’ questions about their experiences. (CL – Understanding).</p>
Year 1	<p>Can they describe how something works? Can they talk about their own work and things that other people have done?</p>
Year 2	<p>Can they explain what went well with their work? If they did it again, can they explain what they would improve?</p>
Year 3	<p>Can they explain what they changed which made their design even better?</p>
Year 4	<p>Have they thought of how they will check if their design is successful? Can they begin to explain how they can improve their original design? Can they evaluate their product, thinking of both appearance and the way it works? Do they take time to consider how they could have made their idea better?</p>

Year 5	<p>Do they keep checking that their design is the best it can be? Do they check whether anything could be improved?</p> <p>Can they evaluate appearance and function against the original criteria?</p>
Year 6	<p>How well do they test and evaluate their final product? Is it fit for purpose?</p> <p>What would improve it?</p> <p>Would different resources have improved their product?</p> <p>Would they need more or different information to make it even better? Does their product meet all design criteria?</p> <p>Did they consider the use of the product when selecting materials?</p>

Cooking and Nutrition	
EYFS	<p>30-50 Use one handed tools and equipment. (PD – Moving and handling). Join construction pieces to build and balance. (Media and Materials).</p> <p>40-60 Handle tools, objects, construction and malleable materials safely and with increasing control.(PD – Moving an handling). Use tools and techniques to shape and assemble materials. (Media and Materials).</p> <p>Show understanding that good practices with regard to hygiene can contribute to good health. (Health and Self Care).</p> <p>ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture and function. (Media and Materials).</p>
Year 1	<p>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>
Year 2	<p>Can they describe the properties of the ingredients they are using? Can they explain what it means to be hygienic?</p> <p>Are they hygienic in the kitchen?</p>
Year 3	<p>Can they choose the right ingredients for a product? Can they use equipment safely?</p> <p>Can they make sure that their product looks attractive?</p> <p>Can they describe how their combined ingredients come together?</p> <p>Can they set out to grow plants such as cress and herbs from seed with the intention of using them for their food product?</p>
Year 4	<p>Do they know what to do to be hygienic and safe?</p> <p>Have they thought what they can do to present their product in an interesting way?</p>
Year 5	<p>Can they describe what they do to be both hygienic and safe? How have they presented their product well?</p>
Year 6	<p>Can they explain how their product should be stored with reasons?</p> <p>Can they set out to grow their own products with a view to making a salad, taking account of time required to grow different foods?</p>

Textiles

EYFS	<p>30-50 Use various construction materials. (media and materials)</p> <p>40-60 Understand that different media can be combined to create new effects. (media and materials)</p> <p>ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (media and materials)</p>
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Year 1	Can they describe how different textiles feel? Can they make a product from textiles by gluing?
Year 2	Can they measure textile? Can they join textiles together to make something? Can they cut textiles? Can they explain why they chose a certain textile?
Year 3	Can they join textiles of different types in different ways? Can they choose textiles both for their appearance and also qualities?
Year 4	Do they think what the user would want when choosing textiles? Have they thought about how to make their product strong? Can they devise a template? Can they explain how to join things in a different way?
Year 5	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?
Year 6	Have they thought about how their product could be sold? Have they given considered thought about what would improve their product even more?

Mechanisms – ks1

Electrical and mechanical components - ks2

EYFS	<p>30-50 Use various construction materials. (media and materials). Use one handed tools and equipment. (PD – Moving and handling).</p> <p>40-60 Understand that different media can be combined to create new effects. (media and materials). Handle tools, objects, construction and malleable materials safely and with increasing control.(PD – Moving an handling).</p> <p>ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (media and materials)</p>
Year 1	Can they make a product which moves? Can they cut materials using scissors? Can they describe the materials using different words? Can they say why they have chosen moving parts?
Year 2	Can they join materials together as part of a moving product? Can they add some kind of design to their product?
Year 3	Do they select the most appropriate tools and techniques to use for a given task? Can they make a product which uses both electrical and mechanical components? Can they use a simple circuit? Can they use a number of components?

Year 4	Can they add things to their circuits? How have they altered their product after checking it? Are they confident about trying out new and different ideas?
Year 5	Can they incorporate a switch into their product? Can they refine their product after testing it? Can they incorporate hydraulics and pneumatics?
Year 6	Can they use different kinds of circuit in their product? Can they think of ways in which adding a circuit would improve their product?

Materials	
EYFS	30-50 Use various construction materials. (media and materials) 40-60 Understand that different media can be combined to create new effects. (media and materials) ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (media and materials)
Year 1	Can they make a structure/model using different materials? Is their work tidy? Can they make their model stronger if it needs to be?
Year 2	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?
Year 3	Do they use the most appropriate materials? Can they work accurately to make cuts and holes? Can they join materials?
Year 4	Can they measure carefully so as to make sure they have not made mistakes? How have they attempted to make their product strong?
Year 5	Are their measurements accurate enough to ensure that everything is precise? How have they ensured that their product is strong and fit for purpose?
Year 6	Can they justify why they selected specific materials? How have they ensured that their work is precise and accurate? Can they hide joints so as to improve the look of their product?

Construction – ks1 Mouldable materials – ks2	
EYFS	30-50 Use various construction materials. (media and materials) 40-60 Understand that different media can be combined to create new effects. (media and materials) ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (media and materials)
Year 1	Can they talk with others about how they want to construct their product? Can they select appropriate resources and tools for their building projects? Can they make simple plans before making objects, e.g. drawings, arranging pieces of construction before building?

Year 2	<p>Can they make sensible choices as to which material to use for their constructions?</p> <p>Can they develop their own ideas from initial starting points? Can they incorporate some type of movement into models?</p> <p>Can they consider how to improve their construction?</p>
Year 3	<p>Do they select the most appropriate materials?</p> <p>Can they use a range of techniques to shape and mould? Do they use finishing techniques?</p>
Year 4	<p>Can they use a range of advanced techniques to shape and mould?</p> <p>Do they use finishing techniques, showing an awareness of audience?</p>
Year 5	<p>Are they motivated enough to refine and further improve their product using mouldable materials?</p>
Year 6	<p>Can they justify why the chosen material was the best for the task?</p> <p>Can they justify design in relation to the audience?</p>