

Northgate Primary School: Design and Technology Skills Progression Planning



"Everything is designed. Few things are designed well!" Brian Reed

Intent: At Northgate Primary School, Design and Technology prepares our children to deal with tomorrow's rapidly changing world. Through an inspiring, rigorous and practical subject we encourage our children to learn and think creatively to solve problems. Design and Technology is cross curricular and will enable children to use their subject knowledge within mathematics, science, history, computing and art.

- **Sense of belonging** To develop children's sense of belonging we encourage children to use their creativeness and imagination, to design and make products that solve real and relevant problems with a variety of contexts. Design and Technology enables children to identify needs and opportunities and respond to these by developing a range of ideas by making products and systems.
- **Confidence in communication** Children have opportunities to develop research, investigate and establish their own ideas independently and collaboratively as part of a team. Team work allows children to intervene creatively to solve problems and share their design concept.
- **Resilient attitude** Through the study of Design and Technology, children combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industry. This allows children to reflect upon and evaluate past and present design, its uses and its effectiveness. Children become innovative, enterprising, resilient, risk-takers which equips them with skills for the future.

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn Overview						
Design and Make: Clay Diwali Lamps, using tools to create a design (Diwali) Make and Cooking and Nutrition: Baking gingerbread (The Gingerbread Man) Food Tasting - Indian cuisine (Diwali)	Design, make and evaluate TRANSPORT making our own car.	Great Fire of London Paper model of houses from 1666 selecting materials to make the roofs, windows, doors, and beams.	Design, make and evaluate a fishing (magnetic) game. Design, make, taste and evaluate healthy wraps Sewing project – noughts and crosses	Design, make and evaluate a Roman Shield for a Roman Soldier	Design, make and evaluate an Anglo- Saxon Broach	Design and Make a cross stitch wall hanging - links to Victorians

Spring Overview

Design and Make: Making a sandwich Create a pancake (pancake day)	Farming and Food fruit salad.	Islands Design their own personal islands with physical and human features. Holidays Home and away Norfolk: Group work to design and build a nest Create a healthy snack based on Mexican food.	Design, make and evaluate stone age jewellery (This links with the topic we're covering – Stone Age - and our art that term). This was a real success!	Design, make and evaluate an irrigation device to move water from one place to another (based on the same principle as a shaduf)	(In Computing) Design, make and evaluate a 3D game using 2DIY3D software	
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Summer Term

Design and Make: A treasure map (Pirates)		Children in World War II Make a ID card holder and buttoned down flap	Summer Term Making a volcano?	Create a trifold leaflet or slideshow presentation about The Waterways (linked to Geography Fieldwork study)	Design, make and evaluate a plastic free lunch.. Modern menu using tudor ingredients, weigh and measure ingredients etc - DT Day.	Create a booklet and video for leavers.
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Planning, Developing and Communicating Ideas

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>-Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.</p>	<ul style="list-style-type: none"> - Use own experience to generate ideas. - Talk about my ideas and make suggestions about what I will do. - Know who I am making things for. - Make models of my ideas in card and paper. - Carry out simple research about what I want to make. - Change and adapt my ideas after research. 	<ul style="list-style-type: none"> - Use own experiences and those of others to generate ideas. -Develop ideas through talking to others, drawing or making models. - Identify a purpose for design and ideas. - Identify and follow simple design criteria - Make simple labelled drawings. 	<ul style="list-style-type: none"> - Generate ideas considering a product's purpose and needs of the user. - Establish criteria for a successful product. - Plan the order of the work before starting. - Explore, develop and communicate design proposals by modelling ideas. - make labelled design drawings. 	<ul style="list-style-type: none"> - Generate ideas considering a product's purpose and needs of the user. - Make labeled drawings from different views showing specific features. - Develop a clear idea of what has to be done, planning how to use materials, equipment and processes. Suggest alternative methods of making if first attempts fail. - Evaluate other products and identify criteria that can be adapted or used for my design. 	<ul style="list-style-type: none"> - generate ideas through brainstorming and identify a purpose for a product. - Draw up a specification for a design. - Develop a clear idea of what has to be done, planning how to use materials, equipment and processes. Suggest alternative methods of making if first attempts fail. - Use results of investigations, information sources including ICT, when developing design ideas. 	<ul style="list-style-type: none"> - Communicate and present my ideas through detailed labelled drawings. - Develop a design specification for a product. - Explore, develop and communicate aspects of the design proposals by modelling ideas in different ways. - Plan the order of work, choosing appropriate materials, tools and techniques.

Working with tools, equipment, materials and components to make quality products (including food)

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> - Children handle equipment and tools effectively, including pencils for writing. 	<ul style="list-style-type: none"> - Make my design using appropriate techniques. - Mark out, measure, cut out and shape a variety of materials with support. - Be able to use simple tools (scissors, hole 	<ul style="list-style-type: none"> - Begin to select tools and materials, using the correct vocabulary to name them. - Measure, cut and score with some accuracy. - Use hand tools safely and appropriately. 	<ul style="list-style-type: none"> - Select tools and techniques. - Measure, mark out, cut, score and assemble components with increasing accuracy. - Work safely and accurately with a range of simple tools. 	<ul style="list-style-type: none"> - Select tools and techniques. - Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. 	<ul style="list-style-type: none"> - Select appropriate materials, tools and techniques - Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. 	<ul style="list-style-type: none"> - Choose appropriate tools, materials, components and techniques. - Assemble components and make working models. - Use a range of tools safely and accurately.

<ul style="list-style-type: none"> - Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. 	<p>punch) correctly and safely.</p> <ul style="list-style-type: none"> -Be able to assemble, join and combine materials using a range of temporary joining methods e.g. glues and tapes. -Can select ingredients for simple recipes. - Can use simple tools and processes to prepare simple ingredients (fruits and vegetables etc) for recipes. - Can follow basic hygiene practices when handling food. - Can use simple finishing techniques to improve the appearance of a product. 	<ul style="list-style-type: none"> - Assemble, join and combine materials in order to make a product. - Cut, shape and join fabrics making basic sewing techniques. - Follow safe procedures for food safety and hygiene. - Choose and use appropriate finishing techniques. 	<ul style="list-style-type: none"> - Evaluate and adapt design, ideas and product, as progress is made, to make improvements. - Measure, tape or pin, cut and join fabric with some accuracy. - Demonstrate hygienic food preparation and storage. - Use finishing techniques to strengthen and improve the appearance of the product using a range of equipment including ICT. 	<ul style="list-style-type: none"> - Join and combine materials and components accurately in temporary and permanent ways. -Sew using a range of different stitches. - Measure, tape or pin, cut and join fabric with some accuracy. - Use different graphical communication techniques (sketches, slides, photos). 	<ul style="list-style-type: none"> - Show understanding of the qualities of different materials. - Use different tools and equipment with a degree of skill as well as safely and accurately. - Weigh and measure accurately (time, material, dry ingredients, liquids) - Apply key rules for food hygiene and other safe practices (e.g. using an oven or electrical goods). - Cut and join with accuracy to ensure a high quality finish to the product. 	<ul style="list-style-type: none"> - Construct products using permanent joining techniques - Pin, sew materials together to create a product. - Achieve a quality product from their own design.
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Evaluating Processes and Products

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> - children given the opportunity for self-expression, vocabulary and ability to communicate through the arts. - The frequency, repetition and depth of their experiences 	<ul style="list-style-type: none"> - Can identify the strengths and weaknesses of something being made and change the design as a result. - Can evaluate a product by answering questions like 'How did I make it?' 'What went well?' 'What would I change?' 	<ul style="list-style-type: none"> - Evaluate a design against simple criteria. - Evaluate products as they are being made, identifying strengths and possible changes needed. - Discuss ideas and finished product, explaining what I like and dislike about them. 	<ul style="list-style-type: none"> - Evaluate a product against original design criteria e.g. how well it meets its intended purpose. - Disassemble and evaluate familiar products. 	<ul style="list-style-type: none"> - Evaluate work during and at the end of the assignment. - Evaluate a product by carrying out appropriate tests. 	<ul style="list-style-type: none"> - Evaluate product against the original design specification. - Evaluate personally and ask for evaluation of others and be able to act on suggestions for improvement as appropriate. 	<ul style="list-style-type: none"> - Evaluate product and design against original criteria , carrying out appropriate tests - make appropriate modifications based on evaluation.

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are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.						
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