

Neatishead Salhouse and Fleggburgh Primary Schools

## Design Technology

"Every great design begins with an even better story." -- Lorinda Mamo, designer

Pupils will leave school having used their creativity and imagination to design and make products within a variety of contexts, considering their own and others' needs and wants. They will have acquired a broad range of subject knowledge and drawn on disciplines such as mathematics, science, engineering, computing and art. Pupils will have learnt how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they will have developed an understanding of its impact on daily life and the wider world. They will have learnt that design and technology makes an essential contribution to the creativity, culture, wealth and well-being of the nation. Pupils will have explored how we use things, how we can change things and how we create new things with a purpose. There is a clear plan for progression. Children will be supported to close any gaps in their learning. Where children show high ability, talent and interest, they will be challenged. Every effort will be made to identify and lift barriers to learning. The subject will be presented as one to enjoy.

## Progression Design

Evaluating		
EYFS Be excited about what they have made		
Year 1 and 2	Year 3 and 4	Years 5 & 6

<ul style="list-style-type: none"> <li>• Know what a product is</li> <li>• Say what a product is for</li> <li>• Describe a product</li> <li>• Talk about their own work (features, design, opinion)</li> <li>• Describe how their product works</li> <li>• Know the features of familiar products</li> <li>• Give reasons for some features (colour choice, material used, joining technique)</li> <li>• Talk about own and others' work (features, design, opinion)</li> <li>• Explain why they chose certain materials, techniques and tools</li> <li>• Describe how their product works</li> </ul>	<ul style="list-style-type: none"> <li>• Start to research and evaluate existing products</li> <li>• Understand that products are designed for a purpose (e.g. a problem, an audience, an event)</li> <li>• Talk about own and others' work (features, design, opinion)</li> <li>• Explain why I chose certain materials, techniques and tools</li> <li>• Say what I would do to improve my product</li> <li>• Research and evaluate existing products to inform planning</li> <li>• Understand that products are designed for a purpose (e.g. a problem, an audience, an event)</li> <li>• Identify what is working well and what can be improved (this is during the make as well as at the end)</li> </ul>	<ul style="list-style-type: none"> <li>• Research and evaluate existing products giving reasons for the decisions of the designers (materials, design, tools, techniques)</li> <li>• Use the ideas from current designers to help with plans</li> <li>• Reflect on designs and develop them bearing in mind the way they will be used (during the process)</li> <li>• Research and evaluate existing products giving reasons for the decisions of the designers (materials, design, tools, techniques)</li> <li>• Use the ideas from current designers to help with own plans</li> <li>• I reflect on own designs and develop them bearing in mind the way they will be used (during the process)</li> </ul>
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Knowledge and Designers

EYFS  
Talk together about designs and designers  
Role play as designers

Year 1 and 2

Year 3 and 4

Years 5 & 6

<ul style="list-style-type: none"> <li>• Know what a designer does</li> <li>• Know the names and the products of some British designers (ensuring diverse representation)</li> <li>• Say what they like and dislike about the product and the designer</li> </ul>	<ul style="list-style-type: none"> <li>• Know some designers from history (ensuring diverse representation)</li> <li>• Talk about some of the tools, techniques and design used by the designer</li> </ul>	<ul style="list-style-type: none"> <li>• Know how key events and individuals have influenced the world (in terms of products) (ensuring diverse representation)</li> <li>• Compare and contrast the work of different designers (e.g. historical and modern)</li> <li>• Give reasons for the decisions made by the designer</li> </ul>
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Design		
EYFS Talk about what they want to make		
Year 1 and 2	Year 3 and 4	Years 5 & 6

<ul style="list-style-type: none"> <li>• Think of ideas and with help can put them into practice</li> <li>• Know what a design is and its purpose</li> <li>• Use pictures and words to describe what they want to do (materials and tools)</li> </ul> <ul style="list-style-type: none"> <li>• Think of ideas and with help can put them into practice</li> <li>• Know what a design is and its purpose</li> <li>• Use pictures and words to describe what to do (materials, techniques, features-mechanics etc. and tools)</li> </ul>	<ul style="list-style-type: none"> <li>• Think of ideas and plan what to do next, based on what I know about materials and components</li> <li>• Select the appropriate tools, techniques and materials</li> <li>• Plan using specific materials and explain my choice</li> <li>• Use pictures and words to describe what I want to do (materials, techniques, features-mechanics etc. and tools)</li> </ul> <ul style="list-style-type: none"> <li>• Think of ideas and plan what to do next, based on what is known about materials and components</li> <li>• Select the appropriate tools, techniques and materials explaining my choices</li> <li>• Communicate my ideas using labelled sketches giving reasons for choices</li> <li>• Start to produce step by step plans</li> </ul>	<ul style="list-style-type: none"> <li>• Use my knowledge of design designers and further research to help influence my own design</li> <li>• Create models or prototypes to show aspects of my design</li> <li>• Produce step by step plans</li> <li>• Use computer aided design</li> <li>• Come up with solutions to problems as they happen.</li> </ul> <ul style="list-style-type: none"> <li>• Use knowledge of design designers and further research to help influence own design</li> <li>• Create models or prototypes to show aspects of my design</li> <li>• Produce step by step plans</li> <li>• Use computer aided design</li> <li>• Take part in technical discussions about my ideas</li> <li>• Come up with solutions to problems as they happen.</li> </ul>
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**Making**

**EYFS**  
Use a variety of tools and materials to make models.

Year 1 and 2

Year 3 and 4

Years 5 & 6

<ul style="list-style-type: none"> <li>• Know what materials can be used for my structure</li> <li>• Know what a join is and can use one</li> <li>• Measure and mark out materials with care and increasing accuracy</li> <li>• Cut materials safely (scissors, junior hacksaw)</li> <li>• Be careful to make work look as neat as possible</li> <li>• Find out how to make materials for structure stronger (folding, rolling and joining, columns and triangles)</li> </ul>	<ul style="list-style-type: none"> <li>• Use appropriate materials and an appropriate join</li> <li>• Measure and mark out materials with care and increasing accuracy</li> <li>• Use scoring and folding to shape materials accurately</li> <li>• Make cuts accurately (scissors and saws)</li> <li>• Make holes accurately (drill, punch)</li> <li>• Join materials to make products using both permanent and temporary fastenings</li> <li>• Methods of working are increasingly precise aiming for a high quality finish</li> <li>• Art skills to apply texture and design to my products</li> </ul>	<ul style="list-style-type: none"> <li>• Select from a variety of materials best suited to my design</li> <li>• Measure using mm and then use scoring, and folding to shape materials accurately.</li> <li>• Make cuts accurately and reject pieces that are not accurate and improve my technique.</li> <li>• Joins are strong and stable, giving extra strength to products.</li> <li>• Some joins are flexible to allow for dismantling or folding.</li> <li>• Methods of working are precise so that products have a high quality finish.</li> <li>• Use computer programming when creating a product</li> </ul>
Mechanics and Electrics		
EYFS Build and construct models setting their own challenges eg tallest strongest longest Explore mechanical toys		
Year 1 and 2	Year 3 and 4	Years 5 & 6

<ul style="list-style-type: none"> <li>• Explore how moving objects work.</li> <li>• Look at wheels, axels, turning mechanisms, hinges and simple levers.</li> <li>• Make a product that moves using a turning mechanism (e.g. wheels, winding) or a lever or a hinge (to make a movement)</li> </ul>	<ul style="list-style-type: none"> <li>• Know the application of mechanisms to create movement.</li> <li>• Combine a number of components well in my product.</li> <li>• Use simple circuits to either illuminate or create motion.</li> <li>• Make a product that uses both electrical and mechanical components.</li> <li>• Products have a good finish so that a user will find it both useful and attractive.</li> </ul>	<ul style="list-style-type: none"> <li>• Choose components that can be controlled by switches or by ICT equipment.</li> <li>• Product is improved after testing.</li> <li>• Use science skills (resistance, batteries in series or parallel, variable resistance to dim lights or control speed) to alter the way electrical products behave.</li> <li>• Use precise electrical connections.</li> <li>• Explored mechanical movement using hydraulics and pneumatics.</li> <li>• Use other DT skills to create housings for my mechanical components.</li> <li>• Product are well finished in a way that would appeal to users</li> </ul>
Textiles		
EYFS Explore different fabrics Use and explore fabrics and how they can be joined together		
Year 1 and 2	Year 3 and 4	Years 5 & 6

<ul style="list-style-type: none"> <li>• Know that textiles have different properties: touch, insulation, texture and waterproof. I select the appropriate textile so that it does the job I want it to.</li> <li>• Describe textiles by the way they feel.</li> <li>• Alter a textile to make it stronger.</li> <li>• Make a product from textiles.</li> <li>• Measure, mark out and cut fabric.</li> <li>• Join fabrics using glue and running stitch.</li> <li>• Make sure my work is neat and tidy.</li> </ul>	<ul style="list-style-type: none"> <li>• Select the appropriate textile(s) for my product.</li> <li>• Use sharp scissors accurately to cut textiles.</li> <li>• Know that the texture and other properties of materials affect choice.</li> <li>• Textile work incorporates the views of intended users' and for the purpose.</li> <li>• Use art textiles skills such as stitching to help create a product that is sturdy and fit for purpose.</li> <li>• Combine materials to add strength or visual appeal</li> <li>• Textile products include structural changes, such as plaiting or weaving to create new products such as rope, belts, bracelets etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Products have an awareness of commercial appeal.</li> <li>• Experiment with a range of materials until I find the right mix of affordability, appeal and appropriateness for the job.</li> <li>• Combine art skills to add colour and texture to my work.</li> <li>• Mark out using patterns and templates</li> <li>• Join textiles using art skills of stitching, embroidering and plaiting to make durable and desirable products.</li> </ul>
Cooking		
<p>EYFS</p> <p>use the basic principles of a healthy and varied diet to prepare simple dishes begin to question and wonder about where food comes from.</p>		
Year 1 and 2	Year 3 and 4	Years 5 & 6



<ul style="list-style-type: none"> <li>• With help, use knives safely</li> <li>• Use a mixing bowl</li> <li>• Be aware of hygiene for cooking</li> <li>• Know some things are made and some things are natural</li> <li>• Know some things are dangerous to eat raw</li> <li>• Know heat changes food</li> <li>• Use a variety of utensils safely</li> <li>• Know what the food groups are</li> <li>• Know where some foods come from</li> <li>• Be aware there are different ways to cook</li> <li>• Prepare a healthy snack and breakfast</li> </ul>	<ul style="list-style-type: none"> <li>• Select ingredients for my product with reasons</li> <li>• Work in a safe, hygienic way</li> <li>• Begin to measure out ingredients</li> <li>• Understand what is healthy and unhealthy</li> <li>• Boil and bake to cook</li> <li>• Understand why we need a healthy diet</li> <li>• Use knowledge of the food groups to plan a lunch</li> <li>• Know where food comes from</li> <li>• Prepare a healthy lunch</li> </ul>	<ul style="list-style-type: none"> <li>• Explain why I have chosen ingredients in a dish</li> <li>• Know why we need certain food types</li> <li>• Grill, boil, fry and bake to cook</li> <li>• Know about local produce</li> <li>• Understand seasonality and this affects food</li> <li>• Know where different crops can be found around the world</li> <li>• understand the concept of carbon footprints</li> <li>• Know different cultures have different diets</li> <li>• Design and prepare a healthy dinner</li> </ul>
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Vocabulary	
YR	• Plan • Draw • Ideas • Design • Make • Build • Combine • Join • Shape • Tools • Complete • Product • Final • Change • Like • Dislike • Next time • Better • Worse • Different • Instead
Y1/2	• Plan • Prepare • Design • Materials • Ideas • Use • Model • Development • Market Research • Survey • Template • Fast • Slow • Faster • Slower • Up • Down • Turn • Wind up • Design • Draw • Sketch • Tools • Fix • Glue • Attach • Features • Brick • Wood • Stone • Cloth • Metal • Foam • Felt • Paper • Tissue • Newspaper • Cardboard • String • Wool • Clay • Scissors • Glue • Tape • Cut • Stick • Decorate • Healthy • Unhealthy • Source • Fruit • Vegetables • Clean • Safe • Dirty • Unsafe • Amount • Ingredients • Recipe • Weight • Nutrients • Vegetarian • Dietary requirements • Change • Improve • Prefer • Useful • Unsuccessful • Future • Progress • modify • Alter • Adapt • Original • Finished article • Evaluate • Graphics
Y3/4	Plan • Organise • Prototype • Initial ideas • Criteria • Diagrams • Labels • Annotate • Brief • Product • Consumer • Customer • Target audience • Purpose • Application • Constraints • Client • Materials • Mould • Liquid • Solid • Form • Shape • Adhesive • Lattice • Mass-produce • Hand-made • Packaging • Presentation
Y5/6	

	<ul style="list-style-type: none"><li>• Machine made</li><li>• Dimensions</li><li>• Durable</li><li>• Healthy</li><li>• Unhealthy</li><li>• Balanced</li><li>• Vitamins</li><li>• Disease</li><li>• Nutrition</li><li>• Healthy eating</li><li>• Hygiene</li><li>• Diet</li><li>• Cross contamination</li><li>• Grams</li><li>• Storage</li><li>• Presentation</li><li>• Taste</li><li>• Texture</li><li>• Flavour</li><li>• Disinfect</li><li>• Bacteria</li><li>• Assess</li><li>• Edit</li><li>• Improve</li><li>• Alter</li><li>• Outcome</li><li>• Develop</li><li>• Test</li><li>• Analyse</li><li>• Effective</li><li>• Fit for purpose</li><li>• Design criteria</li><li>• Alternatives</li><li>• Models</li><li>• Quality</li><li>• Function</li><li>• Functionality</li></ul>
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