

**Long Term Plan for Design Technology**

At Beechwood Primary School, we offer children the chance to use creative thinking and design within a defined purpose and tangible outcome. Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in a process of designing and making. They work in a range of contexts often linked to a humanities topic and encourage cross curricular links to be made.

Through the study of DT pupils 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. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

	<b>Autumn Term</b>	<b>Spring Term</b>	<b>Summer Term</b>
<b>Year 1</b>	<p><b>How can you make a picture move?</b> Children will begin by exploring and enjoying a range of books with moving features. They will explore ways of creating levers, sliders and wheels. Using this knowledge, children will design a page for a storybook about their favourite toy. Finally, they will evaluate what went well.</p>	<p><b>Why are axels important?</b> In this topic, children will investigate moving toys and how they work. They will find out about axles and will use this knowledge to design a jeep that is suitable for either Antarctica or Africa. Children will discuss the importance of design criteria and the steps for making their vehicle. Finally children will evaluate their finished piece.</p>	<p><b>What makes a healthy lunch?</b> In this unit, children will start by exploring a range of packed lunch items. They will have the opportunity to try different types of bread and discuss their likes and dislikes. Children will find out about healthy foods and use this to design a healthy lunch item which is suitable to take on a journey. Children will have the opportunity to practise the skills of cutting, peeling and grating.</p>
<b>Year 2</b>	<p><b>What bread did the Victorians like?</b> Children will begin by finding out where food comes from. They will find out about making healthy food choices by sorting food into food groups. Children will look at how to prepare food hygienically and safely, while following a recipe. Children will be designing their own products, thinking carefully about adding additional toppings or flavourings, as well as choosing a suitable shape for their final product. Finally, children will test and evaluate their bread.</p>	<p><b>Does a kite have to be a diamond shape to fly?</b> During this unit, children will begin by exploring kites linked to the International Kite Festival in Gujarat, India. Children will be investigating different ways to assemble, join and combine materials to create their own kite. Children will be given opportunities to assess their creation and make simple judgements on how their product met their design criteria.</p>	<p><b>What is the best material for a seaside flag?</b> Children will be designing and making their own flags, suitable for on the beach. They will have the opportunity to discuss existing products, as well as using their own experiences to develop ideas. Children will need to measure and mark their materials to complete their final design. They will choose suitable tools and materials for cutting and assembling their flag. Finally children will identify what went well and offer suggestions for how their product could be improved.</p>

<p><b>Year 3</b></p>	<p><b>Can you frame this portrait?</b> In this unit, children learn about stiffening materials and making stable structures through the context of free-standing photograph frames. Children will experiment with strengthening and joining paper and card. Finally they will evaluate their finished product.</p>	<p><b>Can you make Cerberus bite?</b> This unit helps to develop children's understanding of control through investigating simple pneumatic systems and designing and making a model of a mythical creature that has moving parts controlled by pneumatics. The designing and making assignment requires children to develop skills in working as part of a team. Children will create their own "monster" that moves based on an Ancient Greek myth.</p>	<p><b>What food shall we take on our residential trip?</b> Children learn basic food preparation techniques and ways of combining components to create simple food products for a particular purpose. They develop their designing skills by using their own experiences and evaluating existing products to develop ideas. Through discussion, they develop criteria for their design proposals and suggest ways to proceed. They develop their making skills by learning to combine components according to taste, appearance or texture to create a product that contributes to a healthy diet. Through this activity children develop an awareness of health and safety and learn that the quality of the product depends on how well it is made and presented.</p>
<p><b>Year 4</b></p>	<p><b>How can we recreate the Egyptian climate to help us to grow food?</b> Children will find out the purpose of a greenhouse and how it works before moving on to exploring how structures like these can be made stable and what materials would be most appropriate.</p>	<p><b>Can we use electricity to light up a message?</b> In this unit, children develop an understanding of simple electric control through the designing and making of a simple, wired box. They will make use of woodworking tools to cut components to the desired size and join them.</p>	<p><b>What did the Romans use to stop them losing all their coins?</b> In this unit, children learn how textile containers are designed for different purposes and different uses. They design patterns and templates and join and reinforce fabrics. They model their ideas through paper or inexpensive fabric.</p>
<p><b>Year 5</b></p>	<p><b>Can a blanket send a message?</b> Children will begin by examining underground railroad blankets that carried hidden messages. They will plan a design a panel, and choose fabrics to cut and join using effective stitching techniques. They will then join their panels together. Finally, they will evaluate their work.</p>	<p><b>Can a blanket send a message?</b> Children will begin by examining underground railroad blankets that carried hidden messages. They will plan a design a panel, and choose fabrics to cut and join using effective stitching techniques. They will then join their panels together. Finally, they will evaluate their work.</p>	<p><b>Does school promote a healthy ecosystem?</b> Children will survey other classes on preferred ways of attracting wildlife onto school grounds. They will respond and, in small groups, design bird boxes, bird feeders and bug hotels. They will measure, cut and assemble materials before evaluating their work.</p>
<p><b>Year 6</b></p>	<p><b>How can you create bunting from a range of materials?</b> Children will look at how bunting was used to celebrate during World War 2 how this influenced their design regarding patterns/colours. They will research how bunting was constructed to help them determine their own design. They will use a range of materials to create their own bunting, thinking carefully about the</p>	<p><b>What can you discover about the art and culture of the 'Golden Age' and can you make your own paper?</b> During this unit, children will begin by exploring the origins of paper and how its invention helped to impact on the Golden Age. They will plan a checklist for the ideal properties of paper and will then create their own. They will create a prototype of their design and then evaluate it according to their checklist. They will then</p>	<p><b>How much does it cost to build a house in a Favela?</b> Children will look at the materials that would be used to build a house in a Favela and identify the costs that would be involved and purpose for where the house is built. They will produce a list of equipment and tools that they need to build their house and choose materials based on their suitability and aesthetics. They will construct and assemble their house and</p>

	<p>properties of the materials they are using to make it effective. They will measure, mark, cut and shape the materials that they need to create their design. A pulley and lever system will be incorporated to lower and raise the bunting design. Children will then evaluate another group's design and make any suggested amendments that they feel are necessary.</p>	<p>adapt it accordingly to improve the product.</p>	<p>evaluate whether it is fit for its intended purpose.</p>
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