Excalibur Design and Technology Curriculum
Year 6

Design and Technology Intent Year 6

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

Design and Technology Implementation Year 6

Skills	Knowledge
Pupils will be taught to use the following practical methods and skills: **Developing, Planning and Communicating Ideas** • Communicate their ideas through detailed labelled drawings • Develop a design specification • Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways • Plan the order of their work, choosing appropriate materials, tools and techniques **Working with tools, equipment, materials and components to make quality products (Inc food)** • Select appropriate tools, materials, components and techniques • Assemble components make working models • Make modifications as they go along • Use tools safely and accurately • Construct products using permanent joining techniques • Pin, sew and stitch materials together create a product • Achieve a quality product **Evaluating processes and Products**	The children will learn about: **Structures** Focus: Frame Structures Project: African Shelters • I can use research I have done into famous designers and inventors to inform my designs. • I can generate, design, model, and communicate my ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities. • I can use my technical knowledge and accurate skills to problem solve during the making process. • I can use my knowledge of famous designs to further explain the effectiveness of existing products and products I have made. • I can use a wide range of methods to stiffen, strengthen, and reinforce complex structures and can use them accurately and appropriately. • I can use my understanding of computing to program, monitor and control my products. **Electrical Systems** Focus: Monitoring and Control Project: Alarms • I can use a wide range of materials and components • I know electrical systems have an input, process and output • I can explore how more complex electrical circuits and components can be used to create functional products **Food** Focus: Celebrating Culture and Seasonality

• Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests • Record their evaluations using drawings with labels • Evaluate against their original criteria and suggest ways that their product could be improved	Project: 5 Different Breads from 5 Different countries • I can confidently plan a series of healthy meals based on the principles of a healthy and varied diet. • I can use information on food labels to inform choice. • I can research, plan and prepare and cook a savory dish, applying my knowledge of ingredients and my technical skills.

Design and Technology Vocabulary Year 6

Structures Frame Structures	Electrical Systems Monitoring and Control	Food Celebrating Culture and Seasonality
Reinforce, triangulation, stability, temporary, permanent, prototype, innovation, functional, design brief	Light dependent resistor, interface control, micro switch, latching switch Parallel circuit, light emitting diode, monitor, flowchart, design specification, reed switch, tilt switch	Ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality, pour, mix, kneed, whisk, beat, combine, fold, rubbing in