Design Technology an introduction

The national curriculum for Design Technology states that:

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

The national curriculum for Design technology aims to ensure that all pupils:

- *develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world*
- *build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users*
- *critique, evaluate and test their ideas and products and the work of others*
- *understand and apply the principles of nutrition and learn how to cook.*

Design Technology Progression of Skills

Design Technology Age Related expectations

Strand (as per NC)	Working towards ARE	ARE (NC) (By the end of Year 2)
Design		
Pupils should be taught to: Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.	I can think of some ideas of my own. I can explain what I want to do. I can describe my design by using pictures, model mock-ups and words. I can design a product for myself and others following design criteria.	I can think of ideas and plan what to do next. I can choose the best tools and materials. I can give a reason why these are best tools or materials. I can describe my design by using pictures, diagrams, model mock-ups, words and ICT. I can design a product for others following design criteria.

	Make	
Pupils should be taught to: Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing). Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	I can explain what I am making and why. I can select tools and equipment to cut, shape, join and finish. I describe which tools I am using and explain why. I can choose materials and explain why they are being used.	I can explain what I am making and why my audience will like it. I can join things (materials/ components) together in different ways. I can choose materials and explain why they are being used depending on their characteristics.
	Evaluate	
Pupils should be taught to: Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.	I can describe how existing products work. I can talk about my own work linked to what I was asked to do. I can talk about my own work and things that other people have done.	I can describe what went well with my work. I can evaluate what I would do differently if I did it again and explain why. I can judge my work against the design criteria.

Technical Knowledge

Pupils should be taught to:		Use of Materials:
Build structures, exploring how they can be made stronger, stiffer and more stable.		I can measure materials to use in a model or structure. I can join material in different ways. I can use joining, folding or rolling to make it stronger. I can use levers or slides in my work. Mechanisms: I can join materials together as part of a moving product. I can add a specific design to my product. I can use axels and wheels in my work. Textiles: I can measure textiles. I can join textiles together to make something. I cut textiles. I can explain why I chose a certain textile.
Explore and use mechanisms (for example, levers, sliders, wheels and axles), in their products.		

Cooking and Nutrition		
Pupils should be taught to: Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.	I understand that I should eat a healthy range of foodstuffs and understand need for variety in food. I can say what healthy foods are. I can say where some food comes from. I can wash my hands before eating healthy snacks and lunch.	I can describe the properties of the ingredients I am using and why it is important to be varied in my diet. I can explain what it means to be hygienic. I can keep a hygienic kitchen. I can say where food comes from i.e. animals, underground, over ground.