Sheerness West Federation
Progression in DT

Curriculum Aims & Subject Content	
• 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.	
When designing and making, pupils in KS1 should be taught to: Design • 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 Make • 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 Evaluate • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria Technical knowledge • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products Cooking & Nutrition in KS1 • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from.	When designing and making, pupils in KS2 should be taught to: Design • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Make • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Evaluate • investigate and analyse a range of existing products • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • understand how key events and individuals in design and technology have helped shape the world Technical knowledge • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] • apply their understanding of computing to program, monitor and control their products Cooking & Nutrition in KS2 • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques • understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cooking & Nutrition	• I know the importance for good health and a healthy diet.	• I can talk about what I eat at home and begin to discuss healthy foods. • I can say where some food comes from and give examples of food that is grown. • I can use simple tools and prepare food safely.	• I can understand the need of a variety of food in a diet. • I can understand that all food has to be farmed, grown or caught. • I can use a wider range of cookery techniques to prepare food safely.	• I can talk about different food groups and name food from each group. • I can understand that food has to be grown, farmed or caught in Europe and the wider world. • I can use a wider variety of ingredients and techniques to prepare and combine ingredients safely.	• I can understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be heathy and active. • I can understand seasonality and the advantages of eating seasonal locally produced food. • I can read and follow recipes which involve several processes, skills and techniques.	• I can understand the main food groups and the different nutrients that are important for health. • I can understand how a variety of ingredients are grown, reared, caught and processed to make safe and palatable to eat. • I can select appropriate ingredients and use a wide range of techniques to combine them.	• I can confidently plan a series of healthy meals based on the principles of a healthy varied diet. • I can use information on food labels to inform choice. • I can research, plan and prepare and cook a savoury dish, applying my knowledge of ingredients and my technical skills.
Processes	• I can safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • I can use what I have learnt about media and materials in original ways, thinking about uses and purposes.	• I can create simple designs for my product. • I can use pictures and words to describe what I want to do. • I can select from a range of tools and equipment to preform practical tasks. • I can use a range of simple tools to cut, join and combine materials and components safely. • I can ask simple questions about existing products and those I have made. • I can ask simple questions about existing products and those I have made. • I can use wheels and axles in a product.	• I can design pleasing, useful products for myself and others based on design brief. • I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT. • I can choose tools I would like to use and select materials based on my knowledge of their properties. • I can safely measure, mark out, cut and shape materials and components using a range of tools. • I can evaluate and assess existing products and those that I have made using design criteria. • I can investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable. • I can explore and use mechanisms such as levers sliders, wheels and axles in products.	• I can use my knowledge of existing products to design my own functional product. • I can create designs using annotated, sketches, cross-sectional diagrams and simple computer programs. • I can safely measure, mark out, cut, assemble and join with some accuracy. • I can make suitable choice from a wider range of tools and unfamiliar materials and plan out the main stages of using them. • I can investigate and analyse existing products and those I have made, considering a wide range of factors. • I can strengthen frames with diagonal struts. • I can understand how mechanical systems such as leavers and linkages or pneumatic systems create movement.	• I can use my knowledge of existing products to design a functional and appealing product for a particular purpose and audience. • I can create designs using exploded diagrams. • I can use techniques with require more accuracy to cut, join, shape and finish my work. • I can use my knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how well they meet the needs of the intended user. • I can apply techniques I have learnt to strengthen and explore my own ideas. • I can understand and use electrical systems in my products.	• I can use my research into existing products and my market research to inform the design of my own innovative product. • I can create prototypes to show my ideas. • I can make careful and precise measurements so that joins, holes and openings are in exactly the right place. • I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different techniques. • I can make detailed evaluations about existing products and my own considering the view of the others to improve my work. • I can build more complex 3D structures and apply my knowledge of strengthening techniques to makes them stronger of more stable. • I can understand how to use more complex mechanical and electrical systems.	• I can use research I have done into famous designers and inventors to inform my designs. • I can generate, develop, model and communicate my ides 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 products 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 strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. • I can apply my understanding of computing to program, monitor and control my products.
Links to SMSC Cultural Capital	• Enjoy and celebrate personal creativity, through plenty of cross curricular design opportunities. • Embrace failure and difficulties as a necessary path to learning and achieving success. • Consider the impact of materials or ingredients on the wider world and environment. • Follow safety rules ensure collective responsibility for a safe and efficient working environment. • Promote work of past designers from around the world.						