Milford School Design Technology – Long Term Plan

Design and Technology **Purpose of study** (NC)	**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.**			
Design Technology Subject Content (NC)	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an interactive process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].			
EYFS **Early Learning Goals**	**Moving and handling**: Children show good control and coordination in large and small movements. They move confidently in a range of ways, safely negotiating space. They handle equipment and tools effectively, including pencils for writing **Health and self-care**: Children know the importance for good health of physical exercise and a healthy diet, and talk about ways to keep healthy and safe. **The world**: Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one to another. They make observations of animals and plants and explain why some things occur, and talk about changes. **Technology**: Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. **Exploring and using media and materials**: Children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. **Being imaginative**: Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.			
Subject content for Key Stage 1 (NC) Pupils should be taught to:	**Design**	**Make**	**Evaluate**	**Technical knowledge**
	• 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	• 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	• explore and evaluate a range of existing products • evaluate their ideas and products against design criteria	• 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.

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PROGRESSION			
	EYFS	**Year 1**	**Year 2**
	Learning Objectives:		
Design	Generate ideas from existing examples. Begin to talk about their designs.	State what products they are designing and making. Say whether their products are for themselves or other users. Describe what their products are for. Use existing knowledge to generate their own original designs. Begin to develop and communicate ideas by talking and drawing.	State what products they are designing and making. Say whether their products are for themselves or other users. Describe what their products are for. Say how their products will work and how they're suitable for intended users. Use simple design criteria to help develop their ideas. Generate ideas by drawing on their own experiences. Use knowledge of existing products to help come up with ideas. Develop and communicate ideas by talking and drawing. Model ideas by exploring materials, components, constructions kits and by making templates and mock-ups. Use information and communication.
Curriculum Coverage	Superheroes – Big Box Creation (On Sudden Hill text) Superheroes - Superveg	Which way to the Tower? – Designing a Shield What is the most Amazing Toy – Design a toy	
Make	Shows some planning skills by suggesting what to do next. Begins to follow safety procedures. Selects from a range of materials and components.	Plans by suggesting what to do next. Selects from a range of tools, materials and components. Follows procedures for safety and hygiene. Uses a range of materials, components, construction kits, textiles, food ingredients and mechanical products. Measures, marks out, shapes and cuts most materials.	Plans by suggesting what to do next in order. Selects from a range of tools, materials and components according to their characteristics and purpose. Explains their choices. Follows procedures for safety and hygiene. Uses a range of materials, components, construction kits, textiles, food ingredients and mechanical products. Measures, marks out, cuts and shapes a range of materials and components. Assembles, joins and combines materials and components. Begins to use finishing techniques, including those from art and design sessions.
Curriculum Coverage	Food Glorious Food – Fruit Preparation On the Move – Make a vehicle	Which way to the Tower? – Designing a Shield What is the most Amazing Toy? – Design a toy	

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Evaluate	Begin to talk about their design ideas and what they are making. Think about how to make their products better. Begin to explore what products are, who they are for, how they are used, where they are from.	Talk about their design ideas and what they are making. Talk about how to make their products better. Explore what products are, what they are made from, who they are for, how they are used, where they are from. Talk about likes and dislikes of existing products.	Talk about their design ideas and what they are making. Make simple judgements about their products and ideas against design criteria. Talk and write about how to make their products better. Explore what products are, what they are made from, who they are for, how they are used and where they might be used. Talk about likes and dislikes of existing products. Give reasons.
Curriculum Coverage	**EYFS Workshop** **Superheroes – Big Box Creation (On Sudden Hill text)** **On the Move – Make a vehicle**	**What is the most Amazing Toy? Product Comparison**	
Technical Knowledge	Pupils recognise that a range of technology is used in places such as homes and schools. They show an interest in toys with buttons and mechanisms.	Pupils recognise a range of technology used in everyday life. They select and use technology for particular purposes. They know how to operate simple equipment and mechanisms and operate them successfully. Pupils understand the simple working characteristics of materials and components. Know about the movement of simple mechanisms such as levers, sliders, wheels and axles. Recognise that food ingredients can be combined according to their sensory characteristics. Begin to use the correct technical vocabulary for projects	Pupils understand the working characteristics of materials and components. They know about the movement of simple mechanisms such as levers, sliders, wheels and axles. Understand how freestanding structures can be made stronger, stiffer and more stable. Recognise that food ingredients should be combined according to their sensory characteristics. Use the correct technical vocabulary for projects.
Curriculum Coverage	On the Move – Transport/split pin moving part Beebots/IWB/Computers	What is the Most Amazing Toy? – Simple toy mechanisms Where in the World are We? - World food Greeting card with moving part - slider	

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Cooking and Nutrition (NC)	As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.		
Subject content (NC) Pupils should be taught to:	• use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from. (For progression in cooking skills please see final page)		
Cooking and nutrition	Begin to recognise that food comes from plants or animals. Begin to name and sort foods. Begin to recognise that everyone should eat at least five portions of fruit and vegetables every day. Start to prepare simple dishes. Use simple techniques e.g. cutting and mixing.	Recognise that food comes from plants or animals. Food is farmed, grown elsewhere or caught. Name and sort foods into the five groups in 'The Eatwell Plate.' Begin to recognise that everyone should eat at least five portions of fruit and vegetables every day. Prepare some simple dishes. Use techniques e.g. cutting, peeling and grating.	Know that food comes from plants or animals. Food is farmed, grown elsewhere (e.g home), imported or caught. Name and sort foods into the five groups in 'The Eatwell Plate.' Begin to recognise that everyone should eat at least five portions of fruit and vegetables every day and explain why. Know how to prepare simples dishes safely and hygienically, without using a heat source. Prepare a range of simple dishes. Use a number of different techniques e.g. cutting, chopping, peeling and grating.
Curriculum Coverage	All about me - Porridge making Trad Tales – Gingerbread biscuits Food Glorious Food – Fruit kebab/food preparation. Fruit/veg sorting Tuesley Farm Educational visit Pancake Day (British values)	Harvest – Little Red Hen bread making Medieval banquet – food preparation How does your garden grow? Why am I special? - Healthy eating (PSHE) Where in the world are we? – European Food	

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Knife skills	EYFS	Year 1	Year 2
'Bridge' knife technique - soft foods e.g. strawberry, cherry tomato	✔	✔	✔
Bridge' knife technique - harder foods e.g. apple			✔
'Claw' knife technique - soft foods e.g. cucumber		✔	✔
'Claw' knife technique - harder foods e.g. carrot			
Simple combination of 'Bridge' and 'Claw' e.g. onion			
Fine chopping of herbs			
Snipping herbs in a jug using scissors		✔	✔
'Hedghogging' a mango			
Coring an apple			
Peeling soft vegetables e.g courgette			
Peeling e.g. carrot			
Grating soft foods e.g. courgete, cheese			✔
Grating harder foods e.g. carrot, apple			
Finer grating e.g. Parmesan cheese, nutmeg			
Other skills	**EYFS**	**Year 1**	**Year 2**
Tearing e.g. herbs	✔	✔	✔
Crumbling cheese e.g. feta cheese	✔	✔	✔
Arranging ingredients / toppings	✔	✔	✔
Spreading with the back of a spoon e.g. pizza topping	✔	✔	✔
Spreading with a table knife e.g. butter			✔
Scooping		✔	✔
Mashing			✔
Crushing garlic			✔
Using lemon squeezer	✔	✔	✔
Beating ingredients together e.g. salad dressing	✔	✔	✔
Shaping e.g fishcakes / burgers			✔
Coating with egg and breadcrumbs			
Using the hob e.g. to sweat veg for soup			
Whisking, e.g. egg whites or cream			
Shelling a hard-boiled egg			

Baking skills	EYFS	Year 1	Year 2
Sieving flour	✔	✔	✔
Cutting fat into flour			✔
Cracking an egg			✔
Separating an egg			
Beating an egg			✔
Rubbing fat into flour			✔
Adding liquid to flour			
All in one cake mixing		✔	✔
Creaming fat and sugar			
Folding flour into creamed mixture			
Scraping out a bowl with spatula			
Dividing mixture into tins e.g. muffins		✔	✔
Mixing to form a bread dough			✔
Kneading	✔	✔	✔
Shaping e.g. bread rolls	✔	✔	✔
Handling and folding filo pastry	✔	✔	✔
Handling and rolling puff pastry			✔
Handling and rolling shortcrust pastry			
Cutting out rolled pastry	✔	✔	✔
Glazing e.g. brushing with egg, milk, oil	✔	✔	✔
Weighing and measuring	**EYFS**	**Year 1**	**Year 2**
Using measuring spoons and cups	✔	✔	✔
Using a jug to measure liquids			✔
Using balance scales	✔	✔	✔
Using digital or spring balance scales			