Milford Primary School

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Design and Technology

Progression Statements				
	EYFS	Years 1 and 2	Years 3 and 4	Years 5 and 6
Designing	• Develop their small motor skills so that they can use a range of tools competently, safely and confidently. • Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor. • Develop overall body-strength, balance, coordination and agility • Hold a pencil effectively in preparation for fluent writing - using the tripod	• Work within a range of contexts e.g story based, playgrounds., local community, industry and wider environment • 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 work and how they're suitable for intended users • Use existing knowledge to generate their own original designs.	• Work confidently in a range of contexts e.g home, school, leisure, culture and wider environment • Describe the purpose of products • Indicate design features of products • Gather information about the needs and wants of individual groups • Develop their own design criteria and use this to inform ideas • Share and clarify ideas through discussion • Model ideas using prototypes and pattern pieces • Use annotated sketches, diagrams and	• Work confidently in a wide range of contexts. E.g. home, school, leisure, culture, industry, enterprise and wider environment • Describe in detail the purpose of products • Indicate design features of their products that will appeal to intended users • Gather information about the needs and wants of particular individuals and groups • Develop their own design criteria and use this to inform ideas • Carry out research e.g surveys and interviews, questionnaires and

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	grip in almost all cases	• Use knowledge of existing products to help come up with ideas • Develop and communicate ideas by talking and drawing • Model ideas by exploring components, construction kits and making templates and mock-us • Use ICT where appropriate to develop and communicate ideas .	some computer-aided design packages, to develop and communicate ideas, focusing on the needs of the user • Take into account the availability of resources	web based resources to identify users' needs and wants and preferences • Develop detailed design specifications to guide their thinking and planning • Share and clarify ideas confidently through discussions • Model ideas using prototypes and pattern pieces • Use annotated sketches, cross-sectional drawings, exploded diagrams and computer –aided design packages, to develop and communicate ideas. • Generate realistic ideas, focusing on the needs of the user • Make design decisions that take into account

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				the availability of resources • Generate innovative ideas drawing on research • Make informed design decisions based on time, cost and resources constraints
Making	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Explore, use and refine a variety of artistic effects to	• Plans by suggesting what to do next • Selects from a range of tools, materials and components according to their characteristics • 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 and cuts a range of	• Select tools and equipment suitable for the task • Explain their choices, giving evidence • Select materials and components suitable for the task • Order the main stages of making logically • Follow procedures for safety and hygiene • Use extensive range of materials and components suitable for the task e.g textiles, mechanical, construction kits,	• Confidently select tools and equipment suitable to the task • Explain their choices giving evidence • Select materials and components suitable for the task • Produce appropriate list of tools, equipment and materials that they need • Order the stages of the making process in logical steps • Formulate step by step plans as guide to making

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	express their ideas and feelings. • Use a range of small tools, including scissors, paintbrushes.	materials and components • Assembles, joins and combines materials and components • Begins to use finishing techniques, including those from art and design sessions	electrical and food ingredients • Measures, marks out, cuts and shapes materials and components with accuracy • Accurately assembles, joins and combines most materials • Accurately applies several finishing techniques including those from art and design sessions • Use techniques that involve a number of steps • Use resourcefulness when tackling practical problems	• Follow procedures for safety and hygiene • Use extensive range of materials components e.g textiles, mechanicals, construction kits, electrical and food ingredients • Measures, marks out, cuts and shapes materials and an shapes materials and components with accuracy • Accurately assembles, joins and combines materials • Accurately apply a range of finishing techniques including those from art and design • Use techniques that involve a number of steps • Use resourcefulness and resilience and

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				innovation when tackling practical problems • Explain next steps in learning drawing from prior experience
Evaluating	• Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Explore, use and refine a variety of artistic effects to express their ideas and feelings.	• 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 with reason	• Identify strengths and areas for development in their ideas and products • Consider the views of others, including the intended users, to improve their work • Refer to the design criteria as they design and make • Use their design criteria to evaluate and improve their completed products • Critically evaluate the quality of their design, manufacture and the fitness for purpose of their products	• Confidently identify the strengths and areas for development in their ideas and products • Consider the views of others, including intended users, to improve their work • Refer to their design criteria as they design and make • Use their design criteria to evaluate and improve their completed products • Critically evaluate the quality of the design manufacture and fitness for purpose of their products

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			• Evaluate their ideas and products against the original design specification • Investigate and analyse how well products have been made and designed, why materials have been chosen; what methods of construction have been used; how well the products worked; whether they achieved their purpose and needs/wants of the users • Investigate and analyse: who designed the products; where products were designed and made; when products were designed and made; whether products can be recycled or reused • Recognise several inventors, designers, chefs, manufacturers	• Evaluate their ideas and products against their original design specification • Investigate and analyse: how well products have been designed and made; why materials have been chosen; what methods of construction were used; how well the products worked; whether they achieve their purpose and the wants/needs of the users • Investigate and analyse; who designed the products; where the products were designed and made; when products were designed and made; whether products can be recycled and reused • Investigate and analyse: how much

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			and engineers who have been influential in design and technology industries (link with local study)	products cost to make; how innovative products are; how sustainable the materials in products are; what impact products have beyond their intended purpose • Recognise several inventors, designers, chefs, manufacturers, and engineers, who have been influential in the design and technology industries
Technical knowledge	• Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Explore, use and refine a variety of artistic effects to express their ideas and feelings.	• Pupils understand the working characteristics of materials and components • They know about the movement of simple mechanisms such as levers, sliders, wheels and axles • Recognise that food ingredients should be combined according to their sensory characteristics	• Pupils use learning from science, mathematics and other subjects to help design and make products that work • They understand that materials have functional and aesthetic qualities • Apply this thinking successfully to their own products	• Pupils use learning from science, mathematics. And from several subjects and sources to help design, make and evaluate products that work. • They understand that materials have aesthetic and functional qualities

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		• Understanding how free standing structures can be made stronger, stiffer and more stable • Recognise that 3D textiles products can be assembled from 2 identical fabric shapes • Use the correct technical vocabulary for projects	• Recognise that materials can be combines and mixed to create more useful characteristics • Know that mechanical and electrical systems have an input, process and output • Know how mechanical systems such as levers and linkages create movement • Know that simple electrical circuits and components can be used to create functional products • Program computer to control their products • Make strong, stiff shell structures for a purpose • Know that a single fabric shape can be used to make a 3d textile product	• Apply this thinking successfully to their own products • Recognise that materials can be combined and mixed to create more useful characteristics • Know that mechanical and electrical systems have an input, process and output. • Know how mechanical systems such as levers and linkages create movement • Know that simple electrical circuits and components can be used to create functional products • Program computer systems and devices to control products • Make strong, stiff shell structures for a purpose

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			• Recognise a range of fresh and pre-cooked foods	• Know that a single fabric shape can be used to make a 3d textile product • Recognise a wide range of fresh, pre-cooked and processed foods • Know that mechanical systems e.g cams, pulleys or gears create movement • Explore more complex electrical circuits and components • Program computers and devices to monitor changes in the environment and control their products • Reinforce and strengthen a 3d framework • Know that 3d textile products can be made from a combination of fabric shapes • Recreate and adapt existing and new

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				recipes by adding or substituting a range of ingredients
Cooking and nutrition	• Know and talk about the different factors that support their overall health and wellbeing - healthy eating.	• 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 5 groups in the 'eat well' plate • Begin to recognise that everyone should eat at least5 portions a day of fruit and vegetables • Know how to prepare simple dishes safely and hygienically without using a heat source • Use techniques e.g. cutting, chopping, peeling and grating	• Know that food is farmed, reared, grown elsewhere (e.g. home, allotments), exported, imported or caught. This can be on a local, regional and international scale • Know how to prepare and cook a variety of savoury and some sweet dishes safely and hygienically including the use of a heat source • Know how to use a wide range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • Know that a healthy diet is made up of a variety and balance of	• Know that food is farmed, reared, grown elsewhere (e.g. home, allotments), exported, imported or caught. This can be on a local, regional and international scale • Begin to know that seasons and weather affect food availability • Begin to know how food is processed into ingredients that can be eaten or used in cooking • Know how to prepare and cook a variety of savoury and sweet dishes safely and hygienically, including

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			different foods and drinks, as depicted in the 'eatwell plate' • Know that to be active and healthy, food is needed to provide energy for the body	the use of a heat source ● Know how to use a wide range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking ● Know that a healthy diet is made up of a variety and balance of different foods and drinks as depicted on the 'eatwell plate' ● Know that to be active and healthy, food is need to provide energy for the body ● Know that recipes can be adapted to change the taste, texture, aroma and appearance ● Know that different foods contain substances that are

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				needed for health e.g water, fibre, vitamins, minerals and nutrients • Understand that healthy diets must incorporate the correct amounts of food types and substances • Understand that exercise is also important for wellbeing and fitness