

Design & Technology Skills Progression Map



Skill	EYFS	Year 1	Year 2
Design - Understand contexts, users and purposes; - generate, develop, model and communicate ideas	- Work within different contexts such as storybased, home, school, playground; - generate ideas from existing examples; - begin to talk about their designs.	- Work within a range of contexts e.g. storybased, playgrounds; - 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.	- Work confidently within a range of contexts e.g. imaginary, 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 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 technology, where appropriate, to develop and communicate their ideas

Make Planning; Practical skills and techniques	• Show some planning skills by suggesting what to do next; begin to follow safety procedures; • select from a range of materials and components.	• Plan by suggesting what to do next; • selects from a range of tools, materials and components; • follow procedures for safety and hygiene; • use a range of materials, components, construction kits, textiles, food ingredients and mechanical products; • measure, mark out, shape and cut most materials.	• Plan by suggesting what to do next; select from a range of tools, materials and components according to their characteristics; • explain their choices; • follow procedures for safety and hygiene; • use a range of materials, components, construction kits, textiles, food ingredients and mechanical products; measure, mark out, cut and shape a range of materials and components; • assemble, join and combine materials and components; • begin to use finishing techniques, including those from art and design sessions.
Evaluate Own ideas and products; Existing products Key events and individuals.	• 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.

Technical Knowledge Make products work	• Recognise that a range of technology is used in places such as homes and schools; • select and use technology for particular purposes; • show an interest in toys with buttons and mechanisms; • begin to know about the simple working characteristics of materials and components; • begin to understand the movement of simple mechanisms such as levers, sliders and wheels; • know that food ingredients should be combined according to their sensory characteristics.	• Recognise a range of technology is used in places such as homes and schools; • select and use technology for particular purposes; • know how to operate simple equipment and show an interest in toys with buttons, flaps and simple mechanisms and operate them successfully; • 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 should be combined according to their sensory characteristics; • begin to use the correct technical vocabulary for projects	• Understand the working characteristics of materials and components; • 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; • understand how freestanding structures can be made stronger, stiffer and more stable; • recognise that 3D textiles products can be assembled from two identical fabric shapes; • use the correct technical vocabulary for projects.
Cooking and Nutrition Where food comes from; Food preparation, cooking and nutrition	• Begin to recognise that food comes from plants or animals; • food is farmed, grown elsewhere or caught; • begin to 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; • start to prepare simple dishes; • use techniques e.g. cutting and peeling.	• 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; • know how to prepare simple dishes safely and hygienically, without using a heat source; • prepare a range of simple dishes; • use techniques e.g. cutting, chopping, peeling and grating.

Skill	Year 3	Year 4
Design Understand contexts, users and purposes; Generate, develop, model and communicate ideas	• Work confidently within a range of contexts, such as the home, school, leisure and industry; • describe the purpose of their products; • indicate design features of their products; • gather information about the needs and wants of individuals or groups; • develop their own design criteria. • Share and clarify ideas through discussion; • model ideas using prototypes; • use annotated diagrams and some computer-aided design packages to develop and communicate ideas • Generate realistic ideas, focusing on the needs of the user; • begin to take account of the availability of resources	• Work confidently in a range of contexts, e.g. home, school, leisure, culture, industry and wider environment; • describe the purpose of their products; • indicate design features of their products that will appeal to intended users; • gather information about the needs and wants of individuals or groups; • develop their own design criteria and use this to inform their ideas. • Share and clarify ideas confidently, through discussion; • model ideas using prototypes and pattern pieces; • use annotated sketches, some cross-sectional drawings 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 account of the availability of resources.

Make Planning; Practical skills and techniques	• Select tools and equipment suitable to the task; • explain their choices; • select some materials and components suitable to the task; • order the main stages of making; • follow procedures for safety and hygiene; • use a wide range of materials and components e.g. textiles, mechanical, construction kits, electrical and food ingredients; • measure, mark out, cut and shape materials and components with some accuracy; • assemble, join and combine many materials with some accuracy; • apply some finishing techniques	• Confidently select tools and equipment suitable to the task; • explain their choices, giving evidence; • select materials and components suitable to the task; • order the main stages of making in logical steps; • follow procedures for safety and hygiene; • use an extensive range of materials and components e.g. textiles, mechanical, construction kits, electrical and food ingredients; • measure, mark out, cut and shape materials and components with accuracy; • accurately assemble, join and combine most materials; • accurately apply several finishing techniques
Evaluate Own ideas and products; Existing products Key events and individuals.	• Identify the strengths and areas for development in their ideas and products; • consider the views of others; • refer to their design criteria as they design and make; • use their design criteria to evaluate their completed products; • Investigate and analyse: how well products have been designed and made; • which materials and methods were used and which were successful; • how well the products worked; • whether they achieved their purpose and the needs/wants of the users. • Recognise successful inventors, designers, chefs and engineers, who have been influential in the design and technology industries.	• 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; • 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 achieved their purpose and the 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 re-used. • Recognise several inventors, designers, chefs, manufacturers and engineers, who have been influential in the design and technology industries.

Technical Knowledge Make products work	• Know how to use learning from science and mathematics to help design and make products that work; • understand that materials have functional and aesthetic qualities; • recognise that materials can be combined and mixed to create more useful characteristics; • 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 a computer to control their products; • make strong, stiff shell structures; • know that a single fabric shape can be used to make a 3D textile product; • recognise several fresh, pre-cooked and processed foods	• Use learning from science, mathematics and other subjects to help design and make products that work; • understand that materials have functional and aesthetic qualities; • apply this thinking successfully to their own product; • 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 a computer to control their products
Cooking and Nutrition Where food comes from; Food preparation, cooking and nutrition	• Know that food is farmed, reared, grown elsewhere (e.g home), imported or caught locally, regionally and internationally; • know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including the use of a heat source; • know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking; • recognise 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 needed to provide energy for the body.	• 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 different foods and drinks, as depicted on 'The Eatwell Plate.' • know that to be active and healthy, food is needed to provide energy for the body.

Skill	Year 5	Year 6
Design Understand contexts, users and purposes; Generate, develop, model and communicate ideas	• 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 their products. Indicate design features of their products that will appeal to intended users; • gather information about the needs and wants of individuals or groups; • develop their own design criteria and use this to inform their ideas; • carry out research e.g. surveys and interviews to identify users' needs, wants and preferences; • develop a simple design specification to guide their thinking. • Share and clarify ideas confidently, through discussion; • 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 account of the availability of resources; • generate innovative ideas from prior research; • make design decisions based on time, cost and resources constraints.	• 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 their 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 their ideas; • carry out research e.g. surveys, interviews, questionnaires and web-based resources, to identify users' needs, wants and preferences; • develop detailed design specifications to guide their thinking and planning. • Share and clarify ideas confidently, through discussion; • 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 account of the availability of resources; • generate innovative ideas drawing on research; • make informed design decisions based on time, cost and resources constraints

Make Planning; Practical skills and techniques	• Confidently select tools and equipment suitable to the task; • explain their choices, giving evidence; • select materials and components suitable to the task; • produce appropriate lists of tools, equipment and materials that they will need; • order the stages of the making process, in logical steps; • formulate step-by-step plans as guide to making. Follow procedures for safety and hygiene; • use an extensive range of materials and components e.g. textiles, mechanical, construction kits, electrical and food ingredients; • measure, mark out, cut and shape materials and components with accuracy; • accurately assemble, join and combine most materials; • accurately apply a range of finishing techniques, including those from art and design sessions; • use techniques that involve a number of steps; • use resourcefulness when tackling practical problems.	• Confidently select tools and equipment suitable to the task; explain their choices, giving evidence; • select materials and components suitable to the task; • produce appropriate lists of tools, equipment and materials that they will need; • order the stages of the making process, in logical steps; • formulate step-by-step plans as guide to making. • Follow procedures for safety and hygiene; • use an extensive range of materials and components e.g. textiles, mechanical, construction kits, electrical and food ingredients; • measure, mark out, cut and shape materials and components with accuracy; • accurately assemble, join and combine materials; • accurately apply a range of finishing techniques, including those from art and design; • use techniques that involve a number of steps; • use resourcefulness, resilience and innovation, when tackling practical problems; • explain next steps in learning, drawing from prior experience.
Evaluate Own ideas and products; Existing products Key events and individuals.	• 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;	• 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; • evaluate their ideas and products against their original design specification;

	• 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 achieved their purpose and the 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 re-used. Consider cost and sustainability; • consider the impact and innovative qualities of their products; • recognise several inventors, designers, chefs, manufacturers and engineers, who have been influential in the design and technology industries.	• 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 achieved their purpose and the 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 re-used. Consider cost and sustainability; • consider the impact and innovative qualities of their products; • recognise several inventors, designers, chefs, manufacturers and engineers, who have been influential in the design and technology industries.
Technical Knowledge Make products work	• Use learning from science, mathematics, other subjects and sources to help design and make products that work; • understand that materials have functional and aesthetic qualities; • 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 mechanical systems e.g. cams, pulleys or gears create movement; • know that simple electrical circuits and components can be used to create functional products;	• Use learning from science, mathematics and from several subjects and sources to help design, make and evaluate products that work; • understand that materials have functional and aesthetic qualities; • 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 their products; • make strong, stiff shell structures for a purpose;

	• explore more complex electrical circuits and components; • program a 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; • know that 3D textile products can be made from a combination of fabric shapes; • program a computer to monitor changes in the environment and control their products; • reinforce and strengthen a 3D framework; • adapt recipes by adding or substituting one or more ingredients.	• know that a single fabric shape can be used to make a 3D textile product; • know that 3D textile products can be made from a combination of fabric shapes; • 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; • recreate and adapt existing and new recipes by adding or substituting a range of ingredients.
Cooking and Nutrition Where food comes from; Food preparation, cooking and nutrition	• 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; • recognise a range of fresh, pre-cooked and processed foods. • 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 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 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 different foods and drinks, as depicted on 'The Eatwell Plate'; • know that to be active and healthy, food is needed 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 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 our wellbeing and fitness.
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