

Design & Technology Skills Progression

		EY	Y1	Y2	Y3	Y4	Y5	Y6
Design	Understanding the context and purpose.	Work within a range of contexts, eg imaginary, story-based State what products they are making within the context Use words to label the materials they have chosen Say what they have made Show how they will work	Work within an extended range of contexts, such as imaginary, story-based, home, schools, gardens, local community. State what products they are designing and making. Describe what their products are Say how they will work Say how they will make them suitable for their intended users Use simple design criteria	Work within an extended range of contexts, such as imaginary, story-based, home, schools, gardens, local community with clear purpose State what products they are designing and making and why they are doing it. Label what their products are Explain simply how they will work Say how they will make them suitable linking back to purpose Use simple design criteria using technical vocabulary	work confidently within a range of contexts, such as the home, school, leisure, culture with clear purpose Ask questions of peers to clarify needs and purpose of design As a small group develop their design criteria in close association with teacher With the teacher use the design criteria to inform their own ideas	work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise with clear purpose Gather information about the needs and wants of particular individuals and groups Independently develop their own design criteria Independently use design criteria to inform their ideas	work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry with clear industry Describe the purpose of their products as initiated by teacher Indicate the design features of their products that will appeal to intended users Explain how particular parts of their products work Carry out research, using surveys, interviews, questionnaires Identify the needs, wants and preferences of particular individuals and groups Develop a simple design specification to guide their thinking	work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment Describe the purpose of their products Indicate the design features of their products that will appeal to intended users and make this a stand out design Explain how particular parts of their products work using increasingly technical vocabulary Carry out research, using surveys, interviews, questionnaires and comment on the impact these have had on a final design Identify the needs, wants, preferences and values of particular individuals and groups Develop a simple design specification to guide their thinking
	Generating, developing, modelling and communicating ideas	Copy ideas from adults and peers and create ideas from their own imagination Develop and communicate ideas by talking and mark making	Generate ideas by drawing on their own experiences and those provided by the teacher directly Use knowledge of existing products that they are shown, or have read about or imagined, to help come up with ideas Develop and communicate ideas by talking and drawing with the support of a teacher Model ideas by exploring materials, components and construction kits	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 simple aerial view plans Model ideas by exploring materials, components and construction kits and by making templates and mock- ups	Talk about ideas with a partner and teacher Model their ideas as they work Use sketches to develop and communicate their ideas Generate realistic ideas, bearing purpose in mind Make design decisions that take account of the availability of resources	Share ideas and clarify ideas with a partner and teacher Model their ideas using any resources they see fit Use annotated sketches to develop and communicate their ideas Generate realistic ideas, focusing on the needs of the user Make design decisions that take account of the availability of resources but also ask questions if there are materials they would like to use but can't see	Share and clarify ideas through discussion Model their ideas using pattern pieces Use annotated sketches and cross-sectional drawings to develop and communicate their ideas Generate innovative ideas, drawing on research Make design decisions, taking account of constraints such as time and resources	Share and clarify ideas ,referring back to purpose, through discussion Model their ideas using prototypes and pattern pieces Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas Generate realistic and innovative ideas, drawing on research Make design decisions, taking account of constraints such as time, resources and cost

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Making	Planning	Use words to tell an adult what they are doing or give an instruction to a peer if working collaboratively Choose equipment they will use Select from a range of materials and components that may or may not be suitable	Plan by suggesting what to do next Select from a range of tools and equipment Select from a range of materials and components being aware of their characteristics	Plan by explaining what is the next step in the design Select from a range of tools and equipment, explaining their choices Select from a range of materials and components according to their characteristics	Select tools and equipment they think have the characteristics to be successful Explain their choice of tools and equipment Select materials and components they think will be suitable for the task Explain their choice of materials and components Order the main stages of making with peer support	Select tools and equipment explaining their suitability for the task to a peer and adjusting if necessary Explain their choice of tools and equipment in relation to the outcome they want to achieve Select materials and components suitable for the task but reconsider their choices after discussion and observation of others Explain their choice of materials and components according to functional properties Order the main stages of making	Independently select tools and equipment suitable for the task having the confidence to adjust when provided with advice Explain their choice of tools and equipment in relation to the skills and techniques they will be using Select materials and components suitable for the task in discussion with a partner Explain their choice of materials and components according to functional properties and purpose Produce appropriate lists of tools, equipment and materials that they need Formulate step-by-step plans as a guide to making that may need adjustment as making commences	Independently, all things considered, select tools and equipment suitable for the task Explain and justify their choice of tools and equipment in relation to the skills and techniques they will be using Independently select materials and components suitable for the task Explain their choice of materials and components according to functional properties, purpose and aesthetic qualities Produce appropriate lists of tools, equipment and materials that they need Formulate step-by-step accurate plans as a guide to making
	Practical Skills	Use equipment safely mimicking how the teacher has modelled previously Use a range of materials Cut and shape materials Assemble, join and combine materials as they see fit Use finishing techniques so they can celebrate their product with pride	Use equipment safely , knowing what the expectation is and taking personal and group responsibility Use a range of materials including construction materials and kits, textiles, food ingredients and some mechanical components Begin to measure, mark out, cut and shape materials Assemble, join and combine materials and components using a more appropriate technique Use some finishing techniques, including those from art and design that may or may not be appropriate	Follow procedures for safety and hygiene for themselves Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components Measure, mark out, cut and shape materials and components even if not accurate Assemble, join and combine materials and components using the most appropriate technique recognising what will work and wont work Use more appropriate finishing techniques, including those from art and design	Follow procedures for safety and hygiene advising peers Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients and mechanical components Measure, mark out, cut and shape materials and components with some developing accuracy Assemble, join and combine materials and components with some developing accuracy Apply a range of finishing techniques, including those from art and design, with some accuracy	Follow procedures for safety and hygiene Use a wide range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components Measure, mark out, cut and shape materials and components with some increasing accuracy and finesse Assemble, join and combine materials and components with some increasing accuracy and care Apply a range of finishing techniques, including those from art and design, with some accuracy and appropriateness	Follow procedures for safety and hygiene Use a wide range of materials and components including construction materials and kits, textiles, food ingredients, mechanical components and electrical components Accurately measure, mark out, cut and shape materials and components redoing if not accurate enough Accurately assemble, join and combine materials and components seeking advice when necessary Accurately apply a range of finishing techniques, including those from art and design Use techniques that involve a number of steps being prepared to reorder if necessary Demonstrate resourcefulness when tackling practical problems, being prepared to listen to advice from peers or teacher	Follow procedures for safety and hygiene Use a wide range of materials and components including construction materials and kits, textiles, food ingredients, mechanical components and electrical components Accurately measure, mark out, cut and shape materials and components evaluating throughout Accurately assemble, join and combine materials and components Deliberately apply a range of finishing techniques, including those from art and design Use techniques that involve a number of steps Independently demonstrate resourcefulness when tackling practical problems

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		EY	Y1	Y2	Y3	Y4	Y5	Y6
Evaluate	Own ideas and final products	Talk about their ideas and what they are making Say whether they are happy with their product or not Say whether they like their peers' products or not Begin to say how their own products could be improved	Talk about their design ideas and what they are making and begin to say why Make simple judgements about their products With support suggest how their products could be improved	Talk about their design ideas and what they are making and have clarity of purpose Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved	Begin to identify the strengths in their ideas and products Listen to the views of others, to improve their work Reference their design criteria as they design and make	With support identify the strengths and areas for development in their ideas and products Listen to the views of others, including intended users, to improve their work Refer tightly to their design criteria as they design and make Use their design criteria to evaluate their completed products	Identify the strengths and areas for development in their ideas and products, with support suggest how the product might be redesigned Consider the views of others, including intended users, to improve their work and reflect for the future Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make With a peer evaluate their ideas and products against their original design specification	Identify the strengths and areas for development in their ideas and products and say how the product might be redesigned in future Consider the views of others, including intended users, to improve their work and explain how you would use these ideas to adjust the plan for the future Critically evaluate and adjust the quality of the design, manufacture and fitness for purpose of their products as they design and make Independently evaluate their ideas and products against their original design specification
	Existing products	Be able to say - what the products might be - what the products might be for - how products might work - what objects products are made from - whether they like their product	Be able to say - what the products are - who the products are for - what the products are for - how products work - what materials products are made from - what they like about products	Be able to say - what the products are - who the products are for - what the products are for - how products work - how products are used - where products might be used - what materials products are made from - what they like and dislike about products	Know - who designed and made the products? - where products were designed and made - whether products can be recycled	Know - who designed and made the products? - where products were designed and made - when products were designed and made - whether products can be recycled or reused	Comment on - how well products have been designed - how well products have been made - why materials have been chosen - how well products work - how well products achieve their purposes Know - how much products cost to make - how sustainable the materials in products are	Comment on - how well products have been designed - how well products have been made - why materials have been chosen - what methods of construction have been used - how well products work - how well products achieve their purposes - how well products meet user needs and wants Know - how much products cost to make - how innovative products are - how sustainable the materials in products are - what impact products have beyond their intended purpose

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Evaluate	Food	know that all food comes from plants or animals Know that everyone should eat healthily Know That food has to be prepared and this preparation varies	know that all food comes from plants or animals Know that everyone should eat at least 5 portions of fruit and vegetables every day Know How to prepare simple dishes safely without using a heat source with teacher support . How to use techniques such as ripping and tearing and cutting soft food	know that all food comes from plants or animals Know that everyone should eat at least 5 portions of fruit and vegetables every day and that there are other food groups we should eat too Know How to prepare simple dishes safely without using a heat source. How to use techniques such as cutting, grating and peeling with support.	Know that a recipe can be used to help us combine foods for taste and follow a simple recipe Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK and Europe Prepare and cook a simple savoury dish safely and hygienically including, where appropriate, the use of a heat source with support Use a range of techniques such as chopping, slicing, mixing, spreading Know - that a healthy diet is made up from a variety and balance of different food and drink - that to be active and healthy, food and drink are needed to provide energy for the body - that food ingredients can be fresh, pre-cooked	Know that a recipe can be adapted by adding or substituting one or more ingredients and follow and adapt a recipe Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Prepare and cook, following an adapted recipe, a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source Use a range of techniques such as peeling, chopping, slicing, mixing, spreading Know, and consider when adapting recipes, - that a healthy diet is made up from a variety and balance of different food and drink - that to be active and healthy, food and drink are needed to provide energy for the body - that food ingredients can be fresh, pre-cooked and processed	Know that a recipe can be adapted by adding or substituting one or more ingredients to make it healthier and use and adapt a given recipe Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Prepare and cook a variety of predominantly healthy savoury dishes safely and hygienically including, where appropriate, the use of a heat source Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading Know that recipes can be adapted to change the appearance, taste that different food contains different substances – nutrients, water and fibre – that are needed for health	Know that a recipe can be created by adding or substituting one or more ingredients to make it healthier and tastier, use a recipe they have created Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Independently prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading, crushing, juicing Know that recipes can be adapted to change the appearance, taste, texture and aroma that different food and drink contain different substances – nutrients, water and fibre – that are needed for health
	Making Products Work	Know about the characteristics of a range of materials simply some things are strong enough and others aren't, some will get soggy if they get wet and others won't.	Know about the characteristics of some materials. Know about the mechanisms such as sliders and wheels. Know how free-standing structures can be made stronger	Know about the characteristics of a range of materials. Know about the mechanisms such as levers, sliders, wheels and axels. Know how free-standing structures can be made stronger, stiffer and more stable. That a 3D textiles product can be assembled from two identical fabric shapes (e.g. bag, puppet)	Use learning from science to help design products Use learning from mathematics to help design products Choose materials because of their functional properties Know that materials can be combined Use correct age appropriate technical vocabulary for the projects they are undertaking Use pneumatic systems create movement Make a strong, stiff shell structures that a single fabric shape can be used to make a 3D textiles product	Use learning from science to help design that work in theory Use learning from mathematics to help design products that work in theory Choose materials that have functional properties and then consider aesthetic qualities after building Know that materials can be combined and mixed for purpose Know that mechanical and electrical systems have an input and output Use the correct age appropriate technical vocabulary for the projects they are undertaking Use simple electrical circuits and components can be used to create functional products	Use learning from science to help design and make products that work in theory Use learning from mathematics to help design and make products that work in theory Choose materials have both functional properties and aesthetic qualities Know that materials can be combined and mixed to create more useful characteristics Know that mechanical and electrical systems have an input, process and output Use the correct technical age appropriate vocabulary for the projects they are undertaking Use mechanical systems such as cams or pulleys or gears create movement Reinforce and strengthen a 3D framework	Use learning from science to help design and make products that work How to use learning from mathematics to help design and make products that work Choose materials have both functional properties and aesthetic qualities and meet the product spec Know that materials can be combined and mixed to create more useful characteristics desired by the intended user Know that mechanical and electrical systems have an input, process and output Use the correct technical age appropriate vocabulary for the projects they are undertaking Use mechanical systems such as cams or pulleys or gears create movement stitches to form a 3D object and make aesthetically pleasing for audience Use more complex electrical circuits and components can be used to create functional products

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		EY	Y1	Y2	Y3	Y4	Y5	Y6
Using History	Key events and people				To know about inventors, designers and chefs who have developed ground- breaking products	To know about inventors, designers, engineers and chefs who have developed ground- breaking products	To know about inventors, designers, engineers, chefs and manufacturers who have developed ground- breaking products	To know about inventors, designers, engineers, chefs and manufacturers who have developed ground- breaking products and take inspiration from them
Vocabulary				Design, make and evaluate investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function Food fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard, flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients Structure cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder Textile joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish Mechanisms slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards		Design, make and evaluate evaluating, design brief design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluation Food name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet Structure shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, f Textile fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam electrical systems series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device		Design , make and evaluate function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype Textiles seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, Electrical systems bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device, output device, series circuit, parallel circui