Progression in Design and Technology

	EYFS	Year One	Year Two	End of KS 1 expectations	Year Three	Year Four	Year Five	Year Six	End of KS 2 expectations
Design	✤ Select appropriate resources. ✤ Use gestures, talking and arrangements of materials and components to show design. ✤ Use contexts set by the teacher and myself. ✤ Use language of designing and making (join, build, shape, longer, shorter, heavier etc.)	✤Have own ideas. ✤ Explain what I want to do. ✤ Explain what my product is for, and how it will work. ✤ Use pictures and words to plan, begin to use models. ✤Design a product for myself following design criteria. ✤ Research similar existing products.	✤Have own ideas and plan what to do next. ✤Explain what I want to do and describe how I may do it. ✤Explain purpose of product, how it will work and how it will be suitable for the user. ✤Describe design using pictures, words, models, diagrams, begin to use ICT. ✤Design products for myself and others following design criteria. ✤Choose best tools and materials, and explain choices. ✤Use knowledge of existing products to produce ideas.	✤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.	✤Begin to research others' needs. ✤Create a design that meets a range of requirements. ✤Describe purpose of product. ✤Follow a given design criteria. ✤Have at least one idea about how to create product. ✤Create a plan which shows order, equipment and tools. ✤Describe design using an accurately labelled sketch and words. ✤Make design decisions. ✤Explain how product will work. ✤Make a prototype. ✤Begin to use computers to show design.	✤Use research for design ideas. ✤Create a design that meets a range of requirements and is fit for purpose. ✤Begin to create own design criteria. ✤Have at least one idea about how to create product and suggest improvements for design. ✤Produce a plan and explain it to others. ✤Include an annotated sketch. ✤Make and explain design decisions considering availability of resources. ✤Explain how product will work. ✤Make a prototype. ✤Begin to use computers to show design.	✤Use internet and questionnaires for research and design ideas. ✤Take a user's view into account when designing. ✤Begin to consider needs, wants of individuals, groups when designing and ensure product is fit for purpose. ✤Create own design criteria. ✤Have a range of ideas. ✤Produce a logical, realistic plan and explain it to others. ✤Use cross-sectional planning and annotated sketches. ✤Make design decisions considering time and resources. ✤Clearly explain how parts of product will work. ✤Model and refine design ideas by making prototypes and using pattern pieces. ✤Use computer-aided designs.	✤Draw on market research to inform design. ✤Use research of user's individual needs, wants, requirements for design. ✤Identify features of design that will appeal to the intended user. ✤Create own design criteria and specification. ✤Come up with innovative design ideas. ✤Follow and refine a logical plan. ✤Use annotated sketches, cross-sectional planning and exploded diagrams. ✤Make design decisions, considering, resources and cost. ✤Clearly explain how parts of design will work, and how they are fit for purpose. ✤Independently model and refine design ideas by making prototypes and using pattern pieces. ✤Use computer-aided designs.	✤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.

	EYFS	Year One	Year Two	End of KS 1 expectations	Year Three	Year Four	Year Five	Year Six	End of KS 2 expectations
Make	✤Construct with a purpose, using a variety of resources. ✤Use simple tools and techniques. ✤Build / construct with a wide range of objects. ✤Select tools & techniques to shape, assemble and join. ✤Replicate structures with materials / components. ✤Discuss how to make an activity safe and hygienic. ✤Record experiences by drawing, writing, voice recording. ✤Understand different media can be combined for a purpose.	✤Explain what I'm making and why. ✤Consider what I need to do next *select tools/equipment to cut, shape, join, finish and explain choices. ✤Measure, mark out, cut and shape, with support. ✤Choose suitable materials and explain choices. ✤Try to use finishing techniques to make product look good. ✤Work in a safe and hygienic manner.	✤Explain what I am making and why it fits the purpose. ✤Make suggestions as to what I need to do next. ✤Join materials/components together in different ways. ✤Measure, mark out, cut and shape materials and components, with support. ✤Describe which tools I'm using and why. ✤Choose suitable materials and explain choices depending on characteristics. ✤Use finishing techniques to make product look good. ✤Work safely and hygienically.	✤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 characteristic.	✤Select suitable tools/equipment, explain choices; begin to use them accurately. ✤Select appropriate materials, fit for purpose. ✤Work through plan in order. ✤Consider how good product will be. ✤Begin to measure, mark out, cut and shape materials/components with some accuracy. ✤Begin to assemble, join and combine materials and components with some accuracy. ✤Begin to apply a range of finishing techniques with some accuracy.	✤Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. ✤Select appropriate materials, fit for purpose; explain choices. ✤Work through plan in order. ✤Judge if product is going to be good quality. ✤Measure, mark out, cut and shape materials, components with some accuracy. ✤Assemble, join and combine materials and components with some accuracy. ✤Apply a range of finishing techniques with some accuracy.	✤Use selected tools/equipment with good level of precision. ✤Produce suitable lists of tools, equipment/materials needed. ✤Select appropriate materials, fit for purpose; explain choices, considering functionality. ✤Create and follow detailed step by step plan. ✤Explain how product will appeal to an audience. ✤Mainly accurately measure, mark out, cut and shape materials/components. ✤Mainly accurately assemble, join and combine materials/components. ✤Mainly accurately apply a range of finishing techniques. ✤Use techniques that involve a small number of steps. ✤Begin to be resourceful with practical problems.	✤Use selected tools and equipment precisely. ✤Produce suitable lists of tools, equipment, materials needed, considering constraints. ✤Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. ✤Create, follow, and adapt detailed step-by-step plans. ✤Explain how product will appeal to audience; make changes to improve quality. ✤Accurately measure, mark out, cut and shape materials/component. ✤Accurately assemble, join and combine materials/component. ✤Accurately apply a range of finishing techniques. ✤Use techniques that involve a number of steps. ✤Be resourceful with practical problems.	✤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.

	EYFS	Year One	Year Two	End of KS 1 expectations	Year Three	Year Four	Year Five	Year Six	End of KS 2 expectations
Evaluate	✤Adapt work if necessary. ✤Dismantle, examine, talk about existing objects/structures. ✤Consider and manage some risks. ✤Practise some appropriate safety measures independently. ✤Talk about how things work *Look at similarities and differences between existing objects/ materials/ tools. ✤Show an interest in technological toys. ✤Describe textures	✤Talk about my work, linking it to what I was asked to do. ✤Talk about existing products considering: use, materials, how they work, audience, where they might be used. ✤Talk about existing products, and say what is and isn't good. ✤Talk about things that other people have made. ✤Begin to talk about what could make product better.	✤Describe what went well, thinking about design criteria. ✤Talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion. ✤Evaluate how good existing products are. ✤Talk about what I would do differently if I were to do it again and why.	✤Explore and evaluate a range of existing products ✤Evaluate their ideas and products against design criteria.	✤Look at design criteria while designing and making. ✤Use design criteria to evaluate finished product. ✤Say what I would change to make design better. ✤Begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose. ✤Begin to understand by whom, when and where products were designed. ✤Learn about some inventors, designers, engineers, chefs, manufacturers of ground breaking products.	✤Refer to design criteria while designing and making. ✤Use criteria to evaluate product. ✤Begin to explain how I could improve original design. ✤Evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose. ✤Discuss by whom, when and where products were designed. ✤Research whether products can be recycled or reused. ✤Learn about some inventors, designers, engineers, chefs, manufacturers of ground-breaking products.	✤Evaluate quality of design while designing and making. ✤Evaluate ideas and finished product against specification, considering purpose and appearance. ✤Test and evaluate final product. ✤Evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose. ✤Begin to evaluate how much products cost to make and how innovative they are. ✤Research how sustainable materials are. ✤Talk about some key inventors, designers, engineers, chefs, manufacturers of ground-breaking products.	✤Evaluate quality of design while designing and making; is it fit for purpose? ✤Keep checking design is best it can be. ✤Evaluate ideas and finished product against specification, stating if it's fit for purpose. ✤Test and evaluate final product; explain what would improve it and the effect different resources may have had. ✤Do thorough evaluations of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose. ✤Evaluate how much products cost to make and how innovative they are. ✤Research and discuss how sustainable materials are. ✤Consider the impact of products beyond their intended purpose. ✤Discuss some key inventors, designers, engineers, chefs, manufacturers of ground-breaking products.	✤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.

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Technical knowledge – Materials /structures	✤Begin to build structures with a range of materials inside and out (continuous provision and discrete projects). Explore vocabulary: ✤Build ✤Join ✤Construct.	✤Begin to measure and join materials, with some support. ✤Describe differences in materials. ✤Suggest ways to make material/product stronger.		✤ Build structures, exploring how they can be made stronger, stiffer and more stable.	✤Measure materials. ✤Describe some different characteristics of materials. ✤Join materials in different ways. ✤Use joining, rolling or folding to make it stronger. ✤Use own ideas to try to make product stronger.		✤Select materials carefully, considering intended use of product and appearance. ✤Explain how product meets design criteria. ✤Measure accurately enough to ensure precision. ✤Ensure product is strong and fit for purpose. ✤Begin to reinforce and strengthen a 3D frame.	✤Select materials carefully, considering intended use of the product, the aesthetics and functionality. ✤Explain how product meets design criteria. ✤Reinforce and strengthen a 3D frame.	✤ Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
Technical knowledge - Mechanisms	✤With support begin to incorporate moving parts in to models. For example, use split pins to make body parts move.	✤Begin to use levers and sliders.	✤Begin to understand and use wheels and axles.	✤Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	✤Use simple lever and linkages to create movement. ✤Select appropriate tools / techniques. ✤Alter product after checking, to make it better. ✤Begin to try new and different ideas.		✤Use cams, pulleys or gears to create movement. ✤Refine product after testing, considering aesthetics, functionality and purpose. ✤Use innovative computing (CAD) in product designs. ✤Be confident to try new and different ideas.		✤Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

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Technical knowledge – Textiles			✤Measure textiles. ✤Join textiles together to make a product, and explain how I did it (e.g. using running or whip stitch). ✤Carefully cut textiles to produce accurate pieces. ✤Explain choices of textile. ✤Understand that a 3D textile structure can be made from two identical fabric shapes.			✤Select the textiles carefully, considering the user and purpose of the product. ✤Think about how to make product strong. ✤Use a template to shape textiles. ✤Explain how to join and decorate textiles using different techniques (e.g. using running, whip or back stitch, applique, embellishments like beads or buttons). ✤Understand that a simple fabric shape can be used to make a 3D textiles project. ✤Know what a seam allowance is.		✤Select the textiles carefully, considering the user, purpose and aesthetics of the product. ✤Devise and use own template to shape textiles. ✤Make a prototype. ✤Think about how to make product strong and look better. ✤ Explain how to join and decorate textiles using different techniques (e.g. using running stitch, back stitch or blanket stitch, applique, embroidery, adding embellishments and fastenings). ✤Begin to understand that a single 3D textiles project can be made from a combination of fabric shapes. ✤Use Computer Aided Design (CAD). ✤Understand the need for a seam allowance.	

Technical knowledge – Electrical systems						✣Use a number of components in circuit. ✣Learn about how to program a computer to control product.		✣Use different types of circuit in product. ✣Think of ways in which adding a circuit would improve product. ✣Program a computer to monitor changes in environment and control product.	✣Understand and use electrical systems in their products [for example, series circuits.
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Technical knowledge – Food and nutrition	✤Begin to understand some food preparation tools, techniques and processes. ✤Practise stirring, mixing, pouring, blending. ✤Discuss how to make an activity safe and hygienic. ✤Discuss use of senses. ✤Understand need for variety in food. ✤Begin to understand that eating well contributes to good health.	✤Describe textures. ✤Wash hands & clean surfaces. ✤Think of interesting ways to decorate food. ✤Say where some foods come from, (i.e. plant or animal). ✤Describe differences between some food groups (i.e. sweet, vegetable etc.). ✤Discuss how fruits and vegetables are healthy ✤Cut, peel and grate safely, with support.	✤Explain the importance of safety and cleanliness when cooking. ✤Describe properties of ingredients (appearance, texture, taste) and importance of varied diet ✤Know where food comes from (animal, underground etc.). ✤Describe how food is grown, reared, caught. ✤Describe "five a day" to explain how fruits and vegetables are healthy. ✤Cut, peel and grate with increasing confidence.	✤Use the basic principles of a healthy and varied diet to prepare dishes. ✤Understand where food comes from.	✤Carefully select ingredients. ✤Use equipment safely. ✤Make product look attractive. ✤Think about how to grow plants to use in cooking. ✤Begin to understand ingredients can be fresh, pre-cooked or processed. ✤Begin to understand food comes from UK and wider world. ✤Describe how healthy diet, variety, balance of food and drinks. ✤Explain how food and drink are needed for active and healthy bodies. ✤Prepare and cook some dishes safely and hygienically. ✤Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	✤Explain how to be safe and hygienic. ✤Think about presenting product in interesting and attractive ways. ✤Understand ingredients can be fresh, pre-cooked or processed. ✤Begin to understand about food being grown, reared or caught in the UK or wider world. ✤Describe eat well plate and how a healthy diet, variety, balance of food and drinks. ✤Explain the importance of food and drink for active, healthy bodies. ✤Prepare and cook some dishes safely and hygienically by following a recipe; using equipment and utensils correctly. ✤Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, stirring, kneading and baking.	✤Explain how to be safe / hygienic and follow own guidelines. ✤Present product well - interesting, attractive, fit for purpose. ✤Begin to understand seasonality of foods. ✤Understand food can be grown, reared or caught in the UK and the wider world. ✤Describe how recipes can be adapted to change appearance, taste, texture, aroma. ✤Explain how there are different substances in food and drink needed for health. ✤Prepare and cook some savoury dishes safely and hygienically following a recipe including, where appropriate, use of heat source. ✤Use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	✤Understand a recipe can be adapted by adding / substituting ingredients. ✤Explain seasonality of foods. ✤Learn about food processing methods. ✤Name some types of food that are grown, reared or caught in the UK or wider world. ✤Adapt recipes to change appearance, taste, texture or aroma. ✤Describe some of the different substances in food and drink, and how they can affect health. ✤Prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. ✤Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. ✤Understand the importance of correct storage and handling of ingredients (using knowledge of microorganisms).	✤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.