Progression in Design and Technology.

ABC.

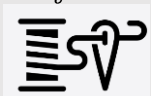
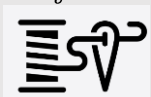
	EYFS	Y1	Y2	End of KS1 Expectations	Y3	Y4	Y5	Y6	End of KS2 Expectations
Design (By understanding contexts, users and purposes).	• Say what they have made and who it is for, what they like and dislike about things. • Expressing their ideas using full sentences, with modelling and support from their teacher.	• Work confidently within a range of familiar contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the 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 • Say how they will make their products suitable for their intended users • Use simple design criteria to help develop their 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.	• 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 • Explain how particular parts of their products work • Gather information about needs and wants of particular individuals and groups • Develop their own design criteria and use these to inform their ideas		• 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 • Explain how particular parts of their products work • Carry out research, using surveys, interviews, questionnaires and web-based resources and use this to inform their plans • Identify the needs, wants, preferences and values of particular individuals and groups • Develop a simple design specification to guide their thinking		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
Design (By developing, modelling and communicating ideas).	• Expressing their ideas using full sentences, with modelling and support from their teacher.	• 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 and construction kits and by making templates and mock-ups • Use information and communication technology, where appropriate, to develop and communicate their ideas • Use software to design and represent product designs.			• Generate realistic ideas, focusing on the needs of the user • Share and clarify ideas 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 • Use computer-aided design to develop and communicate their ideas • Make design decisions that take account of the availability of resources		• Generate realistic sometimes innovative ideas, drawing on research • Share and clarify ideas 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 • Use computer-aided design to develop and communicate their ideas • Make design decisions that taking account of constraints such as time, resources and cost	
Make:	Participate in small group, class and one to one discussion offering their own	• Follow procedures for safety and hygiene • Plan by suggesting what to do next • Select from a range of tools and equipment, explaining their choices			• Order the main stages of making • Select tools and equipment suitable for the task.		• Produce appropriate lists of tools, equipment and materials that they need • Devise step-by-step plans as a guide to making which can be read / followed by someone else		Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting,

(Planning what to make).	ideas using recently introduced vocabulary. •	• Select from a range of materials and components according to their characteristics	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	• 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. • Explain their choice of materials and components according to functional properties and aesthetic qualities. • Begin to put together a step-by-step plan which shows the order and also what equipment and tools they need	• Select tools and equipment suitable for the task. • 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. • Explain their choice of materials and components according to functional properties and aesthetic qualities.	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
Make  (Working with tools, equipment, materials and components to make quality product).	Fine motor: effectively use a range of small tools, including scissors and paintbrushes. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, form and function.	• Follow procedures for safety and hygiene. • Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • With support measure, mark out, cut and shape materials and components • Use tools such as scissors and hole puncher safely. • Assemble, join and combine materials and components e.g. glue or masking tape • Use simple finishing techniques, including those from art and design to improve the appearance of their product		• Follow procedures for safety and hygiene • Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components • measure, mark out, cut and shape materials and components with some accuracy • assemble, join and combine materials and components with some accuracy • apply a range of finishing techniques, including those from art and design, with some accuracy	• Follow procedures for safety and hygiene • Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components • Accurately measure, mark out, cut and shape materials and components • Accurately assemble, join and combine materials and components • Accurately apply a range of finishing techniques, including those from art and design • Use techniques that involve a number of steps • Demonstrate resourcefulness when tackling practical problems	
Evaluate:  (Evaluate own ideas and products).	Children sharing their creations, explaining the process they have used	• Talk about their design ideas and what they are making. • Make simple judgements about their products and ideas against the design criteria • Suggest how their products could be improved	Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria	• 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 their completed products	• Identify the strengths and areas for development in their ideas and products • Consider the views of others, including intended users, to improve their work • Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make • Evaluate their ideas and products against their original design specification	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
Evaluate:	Children can choose one they like best from a selection of products and begin to say why they like it.	• Explore existing product uses, who the product is for, how it works and what it is made from. • Say what they like and dislike about products.		Investigate and analyse • How well products have been designed and made • Why materials have been chosen	Investigate and analyse • How well products have been designed and made • Why materials have been chosen	

 (Evaluation of existing products).		• Suggest improvements to existing designs.		• What methods of construction have been used • If they work to achieve their purposes • How well products meet user needs and wants • Who designed and made the products • Where and when products were designed and made • Whether products can be recycled or reused	• What methods of construction have been used • If they work to achieve their purposes • How well products meet user needs and wants • 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	
Strand 1: Cooking and Nutrition.								
	EYFS	Y1	Y2	End of KS1 Expectations	Y3	Y4	Y5	Y6	End of KS2 Expectations
Knowledge Progression:  Cooking and Nutrition Milestone Knowledge	•To know that the five senses are sight, smell, touch, hearing and taste. •To know that eating well contributes to good health including growing. •To know that fruit and vegetables are healthy.	•To know that food can come from a plant or animal. • To know that fruit and vegetables are grown both in the UK and around the world. •To know that fruit and vegetables are healthy and that everyone should eat at least five portions of fruit and vegetables every day. •To know that food ingredients should be combined according to their sensory characteristics.	•To know that to prepare fruit and vegetables we have to peel and wash them. •To know that fruit and vegetables can be farmed or homegrown. •To know that harvest is the time where farmers gather their crops. •To know that the texture of food is one important characteristic – many vegetables have a crunchy texture. •To know that food comes from the UK and around the world due to differences in the climate and different seasons.	•Use the basic principles of a healthy and varied diet to prepare dishes •Understand where food comes from.	•To know that a healthy diet is made up from a variety and a balance of different food and drink. •To know that a healthy diet is shown in the Eatwell Plate and each type of food are needed in different quantities to stay healthy. •To know that food ingredients can reared, caught or processed. •To know that some sandwiches can be healthy while others are unhealthy due to the choice of ingredients (including the filling, bread and spread).	•To know that the cooking and storage of meat is important due to risk of contamination. •To know that a recipe can be adapted by adding or substituting one or more ingredients •To 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. •To know that people make choices about the foods they ate with just one example being a vegetarian.	•To know that different cultures and religions have different types of breads containing different ingredients. •To know that bread could be a sweet or savoury product. •To know that most bread contains yeast and it is rising agent. •To know that we need to knead the dough in order for it to rise. •To know that food intolerances are common with gluten a common allergen contained within bread.	•To know that different food and drink contains different substances – nutrients, – that are needed for health (revisit this knowledge and make clear links to Science). •To know that some fruits and vegetables are seasonal and grow at different times of the year. •To know that seasons may affect the food available and will impact on the recipe. •To know that most root vegetables are grown all year around. •To know that organic ingredients avoid the use of man-made fertilisers.	•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.
	•To wash hands independently. •Manage their own basic hygiene and	•To wash hands independently and clean surfaces with	•To wash hands independently and clean surfaces with		•To wash hands independently and clean surfaces with support to prepare for	•To explain how to be safe and hygienic when cooking	•To explain how to be safe and hygienic when cooking creating personal guidelines.	•To explain how to be safe and hygienic when cooking creating personal guidelines.	

Skills Progression:  Cooking and Nutrition.	personal needs including food choices. •To effectively use a range of small tools, including cutlery. •To use a butter knife to cut and spread a range of ingredients. •To practise stirring, mixing and pouring.	support to prepare for cooking. •To become familiar with some basic cooking techniques such as washing, peeling and chopping (using soft fruit) with adult support. •To prepare a simple dish safely and hygienically, without using a heat source	support to prepare for cooking. •To cut, peel, grate and blend a range of fruit and vegetables with increasing confidence and accuracy. •To prepare a simple dish safely and hygienically, without using a heat source carefully considering the look and appeal.		cooking discussing safe food storage. •To use a range of techniques such as peeling, chopping, slicing, grating, mixing and spreading to create a savoury product. •To choose the correct tools and use them safely for a range of techniques. •To prepare and cook a savoury dish safely and hygienically with increasing independence and considering the audience.	including safe use of heated equipment. •To use a range of techniques such as peeling, chopping, slicing, grating, mixing and spreading to create a savoury product. •To prepare and cook a savoury dish safely and hygienically including (with the use of a heat source) considering the audience. •To begin to adapt recipes to change appearance, taste, texture and aroma.	•To use a range of techniques including kneading and baking. •To weigh and measure dry ingredients and liquids with increasing confidence. •To prepare and cook a product safely and hygienically including (with the use of a heat source) considering the audience and how a recipe can be adapted. •To independently adapt recipes to change appearance, taste, texture and aroma.	•To use a range of techniques such as peeling, chopping, slicing, grating, mixing spreading and blending to create a savoury product, with a brief to follow. •To weigh and measure dry ingredients and liquids with increasing confidence. • To prepare and cook a savoury dish safely and hygienically using a range of cooking techniques. •To independently adapt recipes accordingly to change the appearance, taste, texture and aroma	
Vocabulary Progression:  Cooking and Nutrition	New Vocabulary: Food, fruit, vegetable, meal, snack, healthy, senses.	New Vocabulary: Hygiene, ingredients, grow, safety, chop, cut, peel, combine, grip. A range of sensory vocabulary. Revisited Vocabulary: Fruit, vegetable, healthy, senses.	New Vocabulary: Harvest, season, farmed, balanced, diet, variety, prepare, fresh, texture, claw grip, bridge grip. Revisited Vocabulary: Hygiene, ingredients, safety, chop, cut, peel, combine, grip.		New Vocabulary: Varied, nutritious assemble, utensils, reared, caught, processed, recipe. All of the food groups. Revisited Vocabulary: Hygiene, Ingredients, safety, balanced, prepare, texture.	New Vocabulary: Flavour, preparation, contamination, bacteria, storage, vegetarian. Revisited Vocabulary: Hygiene, reared, utensils.	New Vocabulary: Individual liberty, savoury, weigh, measure, culture, yeast, rising, knead, dough, gluten, intolerance. Revisited Vocabulary: Flavour, preparation, hygiene, nutritious.	New Vocabulary: seasonality, organic, nutrients, complement, combination. Revisited Vocabulary: ingredients, weigh, measure, hygiene, nutrition, harvest.	

Strand 2: Textiles

	EYFS	Y1	Y2	End of KS1 Expectations	Y3	Y4	Y5	Y6	End of KS2 Expectations
Knowledge Progression:  Textiles Milestone Knowledge	•To know that the five senses are sight, smell, touch, hearing and taste. •To begin to know a wide range of everyday materials. • To know that materials feel and look different with different textures and colours. • To know that objects can be threaded and woven. • To know that one end must contain a knot so the objects do not fall off.	Retrieval of previously taught knowledge.	• To know that a variety of different textiles can be used including dipryl, felt, and reclaimed fabric. • To know that a variety of joining techniques can be used including pinning, sewing, gluing or stapling. • To know that running stitch is the basic stitch in hand-sewing and embroidery, on which all other forms of sewing are based. • To know that finishing techniques could include use of buttons, wool, fabric paints and sequins	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts. When designing and making, pupils should be taught to: Design (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-up, information and communication technology). Make (Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials,	Retrieval of previously taught knowledge.	• To know that two-dimensional shapes can be put together to create three dimensional products. • To know that in addition to the running stitch, additional stitches that could be used include backstitch and cross-stitch. • To know a widening range of decorative finishing techniques such as appliqué, embroidery, fabric pens/paints and printing. • To know that a seam allowance is is the area between the fabric edge and the stitching line on two (or more) pieces of material being sewn together.	Retrieval of previously taught knowledge.	• To know that the properties of materials are significant to design choice including whether they have insulating properties and are water resistant. • To know that in addition to running stitch, back stitch and cross-stitch, a range of decorative stitches could be used to appeal to the audience by considering consistency. • To know that CAD stands for computer-aided design and involves using on-line pattern making software to generate pattern pieces.	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts. When designing and making, pupils should be taught to: Design (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). Make (Select from and use a wider range of tools and equipment to
Skills Progression:  Textiles	•To thread hoops onto their thread. • To use one colour or a mixture of colours naming colours and explaining choices. •To notice and begin to make different patterns. • To begin to tie the two ends together (with support).	Retrieval of previously taught knowledge.	• To design a product using templates and mock-ups to create fabric shapes. • To measure materials with some accuracy. • To select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and		Retrieval of previously taught knowledge.	• To measure materials with some accuracy to create a 3D textiles product. • To measure materials with accuracy. • To select from and use wider range of materials and combine these to create useful characteristics. • To select from and use a wider range of	Retrieval of previously taught knowledge.	*In addition to embedding previously taught knowledge, children will also:* •To measure materials with increasing accuracy to create a 3D textiles product from a combination of fabric shapes. • To measure materials with complete accuracy.	

			finishing with a focus on running-stitch. • To select from and use textiles according to their characteristics (building on Science knowledge).	textiles and ingredients, according to the characteristics). Evaluate (Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria). Technical Knowledge (Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms in their products).		tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing with increased accuracy in types of stitches. • To consider a seam allowance.		• To produce pattern pieces using CAD. • To effectively strengthen and stiffened a product. • To develop skills of sewing textiles by joining right side together and making seams. • To pin a pattern on to fabric ensuring limited wastage, how to leave a seam allowance and different cutting techniques.	perform practical tasks 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). Evaluate (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 Technical Knowledge (Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products Understand and use electrical systems in their products. Apply their understanding of computing to program, monitor and control their products.
Vocabulary Progression:  Textiles	New Vocabulary: Threading, pattern, colour, material.	Retrieval of previously taught knowledge.	New Vocabulary: Joining, marking out, template, stitch, finishing, decorate. Revisited Vocabulary: Design, fabric, materials, glue, design, cutting, evaluate.		Retrieval of previously taught knowledge.	New Vocabulary: fabric, names of specific fabrics, fastening, compartment, stiffening, seam, seam allowance Revisited Vocabulary: Joining, marking out, template, stitch, finishing, decorate.	Retrieval of previously taught knowledge.	New Vocabulary: Prototype, wadding, reinforce, hem. Revisited Vocabulary: fabric, names of specific fabrics, fastening, compartment, stiffening, seam, seam allowance. Joining, marking out, template, stitch, finishing, decorate.	

Strand 3: Structures

	EYFS	Y1	Y2	End of KS1 Expectations	Y3	Y4	Y5	Y6	End of KS2 Expectations
Knowledge Progression:  Structures Milestone Knowledge	•To begin to know some everyday materials and some of their properties. • To know that different materials are used for different jobs. • To know that the shape of some materials can be changed by cutting them.	• To know that materials are used for different purposes based on their properties. • To know that structures can be made stronger, stiffer and more stable. • To know that the shape of a structure can impacts it stability. • To know that there are many jobs in engineering, design and construction.	Retrieval of previously taught knowledge.	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts. When designing and making, pupils should be taught to: Design (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-up, information and communication technology). Make (Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials,	• To know that there are a variety of both two-dimensional and three-dimensional shapes. • To know a shell structure is a hollow structure made from a thin outer layer. • To know that 3D shapes (such as sandwich box and including cubes and cuboids) are made from nets. • To know that structures can be made stronger, stiffer and more stable.	Retrieval of previously taught knowledge.	• To know and develop understanding of what structures are and how they can be made stronger, stiffer and more stable. • To know that square frameworks can be reinforced using diagonals creating triangulation to add strength to a structure. • To know that paper tubes can be made from rolling sheets of newspaper diagonally around pieces of e.g. dowel to reinforce and strengthen. • To know that different tools can be used for different purposes but must be used safely in line with teacher expectations.	Retrieval of previously taught knowledge.	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts. When designing and making, pupils should be taught to: Design (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). Make (Select from and use a wider range of tools and equipment to
Skills Progression:  Structures	• To select appropriate tools for mark making • To engage in basic construction e.g. stacking blocks vertically. •To begin to develop basic joining construction skills e.g. little balance involved. •To use everyday materials for 'junk modelling.'	•To select from and use a range of tools and equipment to perform practical tasks such as marking out, joining with a focus on cutting. • To measure, mark out, cut and shape materials. • To assemble, join and combine materials and components with increasing accuracy.	Retrieval of previously taught knowledge.		•To select skills and techniques of scoring, cutting out and assembling using pre-drawn nets. • To select different ways of stiffening and strengthening their shell structures e.g. folding and shaping, corrugating, ribbing, laminating. •To practise using computer-aided design	Retrieval of previously taught knowledge.	• To select different ways of stiffening and strengthening 3D structures. •To develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost • To demonstrate the accurate use of tools	Retrieval of previously taught knowledge.	

		• To use simple finishing techniques suitable for the structure they are creating.		textiles and ingredients, according to the characteristics). Evaluate (Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria). Technical Knowledge (Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms in their products).	(CAD) software to design the net, text and graphics for their products according to purposes. •To use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas		and equipment (including techniques using junior hacksaws, G-clamps, bench hooks, square section wood, card triangles and hand drills to construct wooden frames, as appropriate). • To use annotated sketches and cross-sectional drawings to develop and communicate their ideas.		perform practical tasks 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). Evaluate (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 Technical Knowledge (Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products Understand and use electrical systems in their products. Apply their understanding of computing to program, monitor and control their products.
Vocabulary Progression:  Structures	New Vocabulary: Design, test, model, construct, strong.	New Vocabulary: structure, framework, cylinder, base, straight, curved, edge, function. Revisited Vocabulary: cut, fold, join, fix.	Retrieval of previously taught knowledge.		New Vocabulary: Protection, shell structure, three-dimensional (3-D) shape, net, cube, capacity, prototype, length, width, accuracy, adhesive. Revisited Vocabulary: structure, framework, cylinder, base, straight, curved, edge, function.	Retrieval of previously taught knowledge.	New Vocabulary: Frame structure, stiffen, strengthen, reinforce, triangulation, stability. Revisited Vocabulary: Shell structure, three-dimensional (3-D) shape, net, cube, capacity, prototype, length, width, accuracy, adhesive, structure, framework, cylinder, base, straight, curved, edge, function.	Retrieval of previously taught knowledge.	