

EYFS DT			
Nursery	Personal, Social and Emotional Development		• Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.
	Physical Development		• Use large-muscle movements to wave flags and streamers, paint and make marks. • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors.
	Understanding the World		• Explore how things work.
	Expressive Arts and Design		• Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
EYFS	Physical Development		Progress towards a more fluent style of moving, with developing control and grace. • Develop their small motor skills so that they can use a range of tools competently, safely and confidently. • Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
	Expressive Arts and Design		• Explore, use and refine a variety of artistic effects to express their ideas and feelings. • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills.
ELG	Physical Development	Fine Motor Skills	Use a range of small tools, including scissors, paintbrushes and cutlery.
	Expressive Arts and Design	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used.

KS1 DT				
Progression of Knowledge and Skills				
Prior Learning	Designing	Making	Evaluating	Technical knowledge and understanding
	Year 1		Year 2	
Mechanical Systems	• Early experiences of working with paper and card to make simple flaps and hinges. • Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.		• Assembled vehicles with moving wheels using construction kits. • Explored moving vehicles through play. • Gained some experience of designing, making and evaluating products for a specified user and purpose. • Developed some cutting, joining and finishing skills with card.	
	• Generate ideas based on simple design criteria and their own experiences, explaining what they could make. • Develop, model and communicate their ideas through drawings and mock-ups with card and paper.		• Generate initial ideas and simple design criteria through talking and using own experiences. • Develop and communicate ideas through drawings and mock-ups.	

	- Plan by suggesting what to do next. - Select and use tools, explaining their choices, to cut, shape and join paper and card. - Use simple finishing techniques suitable for the product they are creating.	- Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing. - Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.
	- Explore a range of existing books and everyday products that use simple sliders and levers. - Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria.	- Explore and evaluate a range of products with wheels and axles. - Evaluate their ideas throughout and their products against original criteria.
	- Explore and use sliders and levers. - Understand that different mechanisms produce different types of movement. - Know and use technical vocabulary relevant to the project.	- Explore and use wheels, axles and axle holders. - Distinguish between fixed and freely moving axles. - Know and use technical vocabulary relevant to the project.
Structures		- Experience of using construction kits to build walls, towers and frameworks. - Experience of using of basic tools e.g. scissors or hole punches with construction materials e.g. plastic, card. - Experience of different methods of joining card and paper.
		- Generate ideas based on simple design criteria and their own experiences, explaining what they could make. - Develop, model and communicate their ideas through talking, mock-ups and drawings.
		- Plan by suggesting what to do next. - Select and use tools, skills and techniques, explaining their choices. - Select new and reclaimed materials and construction kits to build their structures. - Use simple finishing techniques suitable for the structure they are creating.
		- Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. - Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria.
		- Know how to make freestanding structures stronger, stiffer and more stable. - Know and use technical vocabulary relevant to the project.
Textiles	- Explored and used different fabrics. - Cut and joined fabrics with simple techniques. - Thought about the user and purpose of products.	
	- Design a functional and appealing product for a chosen user and purpose based on simple design criteria. - Generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology.	
	- Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. - Select from and use textiles according to their characteristics.	

	• Explore and evaluate a range of existing textile products relevant to the project being undertaken. • Evaluate their ideas throughout and their final products against original design criteria.	
	• Understand how simple 3-D textile products are made, using a template to create two identical shapes. • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. • Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons. • Know and use technical vocabulary relevant to the project.	
Food and nutrition	• Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance taste and smell. • Experience of cutting soft fruit and vegetables using appropriate utensils.	• Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance taste and smell. • Experience of cutting soft fruit and vegetables using appropriate utensils.
	• Design appealing products for a particular user based on simple design criteria. • Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. • Communicate these ideas through talk and drawings.	• Design appealing products for a particular user based on simple design criteria. • Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. • Communicate these ideas through talk and drawings.
	• Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. • Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.	• Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. • Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.
	• Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. • Evaluate ideas and finished products against design criteria, including intended user and purpose.	• Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. • Evaluate ideas and finished products against design criteria, including intended user and purpose.
	• Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate. • Know and use technical and sensory vocabulary relevant to the project.	• Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate. • Know and use technical and sensory vocabulary relevant to the project.
Electrical Systems	NOT A REQUIREMENT IN KS1	NOT A REQUIREMENT IN KS1

KS2 DT
Progression of Knowledge and Skills

Prior Learning	Designing	Making	Evaluating	Technical knowledge and understanding
	Year 3	Year 4	Year 5	Year 6
Mechanical Systems	• Explored and used mechanisms such as flaps, sliders and levers. • Gained experience of basic cutting, joining and finishing techniques with paper and card.	• Explored simple mechanisms, such as sliders and levers, and simple structures. • Learnt how materials can be joined to allow movement. • Joined and combined materials using simple tools and techniques.	• Experience of axles, axle holders and wheels that are fixed or free moving. • Basic understanding of different types of movement. • Experience of cutting and joining techniques with a range of materials including card, plastic and wood. • An understanding of how to strengthen and stiffen structures.	• Experience of axles, axle holders and wheels that are fixed or free moving. • Basic understanding of electrical circuits, simple switches and components. • Experience of cutting and joining techniques with a range of materials including card, plastic and wood. • An understanding of how to strengthen and stiffen structures.
	• Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas.	• Generate realistic and appropriate ideas and their own design criteria through discussion, focusing on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas.	• Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. • Develop a simple design specification to guide their thinking. • Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views.	• Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. • Develop a simple design specification to guide their thinking. • Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views.
	• Order the main stages of making. • Select from and use appropriate tools with some accuracy to cut, shape and join paper and card. • Select from and use finishing techniques suitable for the product they are creating.	• Order the main stages of making. • Select from and use appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. • Select from and use finishing techniques suitable for the product they are creating.	• Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost.	• Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost.

	- Investigate and analyse books and, where available, other products with lever and linkage mechanisms. - Evaluate their own products and ideas against criteria and user needs, as they design and make.	- Investigate and analyse books, videos and products with pneumatic mechanisms. - Evaluate their own products and ideas against criteria and user needs, as they design and make.	- Compare the final product to the original design specification. - Test products with the intended user, where safe and practical, and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. - Consider the views of others to improve their work. - Investigate famous manufacturing and engineering companies relevant to the project.	- Compare the final product to the original design specification. - Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. - Consider the views of others to improve their work. - Investigate famous manufacturing and engineering companies relevant to the project.
	- Understand and use lever and linkage mechanisms. - Distinguish between fixed and loose pivots. - Know and use technical vocabulary relevant to the project.	- Understand and use pneumatic mechanisms. - Know and use technical vocabulary relevant to the project.	- Understand that mechanical systems have an input, process and an output. - Understand how cams can be used to produce different types of movement and change the direction of movement. - Know and use technical vocabulary relevant to the project.	- Understand that mechanical and electrical systems have an input, process and an output. - Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. - Know and use technical vocabulary relevant to the project.
Structur es		- Experience of using different joining, cutting and finishing techniques with paper and card. - A basic understanding of 2-D and 3-D shapes in mathematics and the physical properties and everyday uses of materials in science. - Familiarity with general purpose software that can be used to draw accurate shapes, such as Microsoft Word, or simple computer-aided design (CAD), such as 2D Primary by Techsoft.	- Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with construction materials. - Basic understanding of what structures are and how they can be made stronger, stiffer and more stable.	
		- Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the product. - Develop ideas through the analysis of existing shell structures and use	- Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. - Develop a simple design specification to guide the development of their ideas and products, taking account of	

		computer-aided design to model and communicate ideas.	constraints including time, resources and cost. • Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches.	
		• Plan the order of the main stages of making. • Select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with some accuracy. • Explain their choice of materials according to functional properties and aesthetic qualities. • Use computer-generated finishing techniques suitable for the product they are creating.	• Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. • Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. • Use finishing and decorative techniques suitable for the product they are designing and making.	
		• Investigate and evaluate a range of shell structures including the materials, components and techniques that have been used. • Test and evaluate their own products against design criteria and the intended user and purpose.	• Investigate and evaluate a range of existing frame structures. • Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. • Research key events and individuals relevant to frame structures.	
		• Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Develop and use knowledge of how to construct strong, stiff shell structures. • Know and use technical vocabulary relevant to the project.	• Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevant to the project.	
Textiles	• Have joined fabric in simple ways by gluing and stitching. • Have used simple patterns and templates for marking out. • Have evaluated a range of textile products.			• Experience of basic stitching, joining textiles and finishing techniques. • Experience of making and using simple pattern pieces.
	• Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s.			• Generate innovative ideas by carrying out research including surveys, interviews and questionnaires.

	• Produce annotated sketches, prototypes, final product sketches and pattern pieces.			• Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design. • Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification.
	• Plan the main stages of making. • Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. • Select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern.			• Produce detailed lists of equipment and fabrics relevant to their tasks. • Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.
	• Investigate a range of 3-D textile products relevant to the project. • Test their product against the original design criteria and with the intended user. • Take into account others' views. • Understand how a key event/individual has influenced the development of the chosen product and/or fabric.			• Investigate and analyse textile products linked to their final product. • Compare the final product to the original design specification. • Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • Consider the views of others to improve their work.
	• Know how to strengthen, stiffen and reinforce existing fabrics. • Understand how to securely join two pieces of fabric together. • Understand the need for patterns and seam allowances. • Know and use technical vocabulary relevant to the project.			• A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Fabrics can be strengthened, stiffened and reinforced where appropriate.
Food and nutrition	• Know some ways to prepare ingredients safely and hygienically. • Have some basic knowledge and understanding about healthy eating and The eatwell plate.		• Have knowledge and understanding about food hygiene, nutrition, healthy eating and a varied diet. • Be able to use appropriate equipment and utensils, and apply a range of	

	• Have used some equipment and utensils and prepared and combined ingredients to make a product.		techniques for measuring out, preparing and combining ingredients.	
	• Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. • Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.		• Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. • Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. • Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.	
	• Plan the main stages of a recipe, listing ingredients, utensils and equipment. • Select and use appropriate utensils and equipment to prepare and combine ingredients. • Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.		• Write a step-by-step recipe, including a list of ingredients, equipment and utensils • Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. • Make, decorate and present the food product appropriately for the intended user and purpose.	
	• Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. • Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.		• Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. • Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. • Understand how key chefs have influenced eating habits to promote varied and healthy diets.	
	• Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of fresh and processed ingredients appropriate for		• Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products.	

	their product, and whether they are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.		• Know and use relevant technical and sensory vocabulary.	
Electrical Systems		• Constructed a simple series electrical circuit in science, using bulbs, switches and buzzers. • Cut and joined a variety of construction materials, such as wood, card, plastic, reclaimed materials and glue.		• Understanding of the essential characteristics of a series circuit and experience of creating a battery-powered, functional, electrical product. • Initial experience of using computer control software and an interface box or a standalone box, e.g. writing and modifying a program to make a light flash on and off.
		• Gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. • Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams.		• Use research to develop a design specification for a functional product that responds automatically to changes in the environment. Take account of constraints including time, resources and cost. • Generate and develop innovative ideas and share and clarify these through discussion. • Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.
		• Order the main stages of making. • Select from and use tools and equipment to cut, shape, join and finish with some accuracy. • Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities.		• Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. • Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product. • Create and modify a computer control program to enable an electrical product to work automatically in response to changes in the environment.
		• Investigate and analyse a range of existing battery-powered products. • Evaluate their ideas and products against their own design criteria and		• Continually evaluate and modify the working features of the product to match the initial design specification.

		identify the strengths and areas for improvement in their work.		• Test the system to demonstrate its effectiveness for the intended user and purpose. • Investigate famous inventors who developed ground-breaking electrical systems and components.
		• Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. • Apply their understanding of computing to program and control their products. • Know and use technical vocabulary relevant to the project.		• Understand and use electrical systems in their products. • Apply their understanding of computing to program, monitor and control their products. • Know and use technical vocabulary relevant to the project.