

Aspect	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Tools ALL PROJECTS	Select and explain why they have chosen a particular tool for a task.	Use tools safely for cutting and joining materials, components and finishing products	Select the appropriate tools and explain choices	Analyse the potential of a range of tools and use with accuracy	Name and select appropriate tools for a task and use them with precision	Use complex tools with increasing accuracy
Materials ALL PROJECTS	Select and explain choice of materials, sometimes with help.	Choose appropriate materials and suggest ways of manipulating them to achieve a desired effect	Plan which materials will be needed for a task and explain why	Choose from a range of materials showing an understanding of their different characteristics	Select and combine material with precision	Choose the best materials for a task showing and understanding of their work characteristics
Health and Safety ALL PROJECTS	Explain how to keep safe during a practical task.	Work safely and hygienically in construction and cooking activities	Follow health and safety rules for cooking and baking activities	Follow health and safety rules when working with materials and substances	Select and the name appropriate tools for specific jobs and demonstrate how to use them safely	Demonstrate how their product take into account the safety of the user
Textiles	Cut out shapes from a range of fabrics and papers.	Join fabrics using running stitch, glue, staples, over sewing and tape	Create a simple pattern for a design	Use simple pattern to create a life-sized item of clothing	Create a 3D product using a range of materials and sewing techniques.	Combine fabrics to create more useful properties and make a product of high quality, checking for snags and glitches
Card making	Fold, tear, roll and cut paper and card.	Create simple hinges and pop-ups using card	Cut slots in card and create nets	Use more complex pop ups	Combine materials with temporary or fixed joints	Combine materials with moving joints
Cutting	Cut accurately and safely with scissors	Cut wood/ dowel using a bench hook and hacksaw	Measure and mark wood/dowel	cut internal shapes	Cut safely and accurately to a marked line	Use a craft knife, cutting a mat and safety ruler with one to one supervision if needed
Joining	Join appropriately, using glue or tape.	Attach features to a vehicle (e.g. an axle and wheels or a sail and rudder). Join appropriately, with glue and / or tape, for different materials and situations	Join fabrics using a running stitch	Use a glue gun with close supervision (one to one)	Use a glue gun with close supervision	Join materials, using the most appropriate method for the materials of purpose
Structures	Build simple structures	Improve structures by making them stronger, stiffer and more stable	Create a shell or frame structure using diagonal struts to strengthen	Prototype and build frame and shell structures, showing awareness of how to strengthen, stiffen and reinforce	Build a framework using a range of materials (e.g. wood, card, corrugated plastic) to supports mechanisms	Select the most appropriate materials and frame works for different structures, explaining what makes them strong.
Mechanisms	Use wheels, axles, levers and sliders.	Create and use wheels and axles, levers and sliders	Create and use simple gears, pulleys, cams, levels and linkages	Use pulleys, levers and linkages in their products	Use cams or gears in their product	Select the most appropriate mechanical system for a particular purpose
Electricity	Identify and talk about products that use electricity to make them work.	Create working circuits to light a bulb or work a buzzer	Build models, incorporating circuits with buzzers and bulbs	Build models incorporating motors	Build models incorporating switches to turn on and off	Design products incorporating the appropriate electrical systems
ICT	Input random control instructions to simple devices for an unplanned outcome (e.g. making Roamer move).	Input a sequence on instructions to a device for a planned outcome	Evaluate their own programme, refine and improve it	Create a solution to a problem using control output device that has a sequence of events that activate it	Monitor and control more than one output, in response to changes	Develop, try out and refine sequences of instructions to effectively monitor, measure and control events
Preparing and cooking food	Measure and weigh food items using non-standard measures (e.g. spoons and cups).	Cut, peel, grate and chop a range of ingredients to make dishes from other countries	Combine a variety of ingredients using range of cooking techniques	Measure and weigh ingredients appropriately to prepare and cook a range of savoury dishes	Combine food ingredients appropriately (e.g. kneading, rubbing in and mixing)	Use appropriate tools and equipment, weighing and measuring with scales
Nutrition	Identify the main food groups, including fruit and vegetables.	Recognise the need for a variety of foods in a diet	Describe what a balanced diet is	Make healthy eating choices and explain why	Evaluate meals and consider if they contribute towards a balanced diet	Plan how they can have a healthy affordable diet
Origins of food	Identify the source for common foods.	Explain where the food they eat comes from (e.g. by referring to countries, counties, animals and plants)	Identify food which comes from the UK and other countries in the world	Explain some of the process that foods go through to preserve/make them more appealing	Explain what times of year particular foods are in season	Explain how ingredients were grown, reared, caught and processed
Designing ALL PROJECTS	Draw a simple picture of an intended design with basic labelling.	Produce detailed, labelled drawings or models of product based on design criteria	Share ideas through words, labelled sketches and models, recognising that designs have to meet a range of needs, including being fit for purpose	Collect information from a number of different sources and use this information to inform design ideas in words, labelled sketches, diagrams and models, keeping in mind fitness for purpose and the end user	Use various of information, clarifying/sharing ideas though discussion, labelled sketches, cross sectional diagrams and modelling recognising that ideas have to meet a arrange of needs	Develop detailed criteria for designs for products aimed at particular individuals or groups, sharing ideas through cross-sectional and exploded diagrams, prototypes and pattern pieces
Using ICT to aid design	Use ICT packages to create a simple plan for a design.	Use ICT packages to create a labelled design or plan	Use ICT packages to create a labelled design or plan, in detail	Use ICT packages to create alternatives for an initial design	Use CAD and CAM packages, to suggest alternative design ideas and explain their ideas and intentions	Use CAD, CAM packages to design moving parts of a design
Working from plans ALL PROJECTS	With help, put ideas into practice.	Think of ideas and plan what to do next, based on their experiences of working with materials and components	Make realistic plans, identifying processes equipment and materials needed	Make realistic, step by step plans, reflecting on designs as the product develops.	Work from own detailed plans, modifying them where appropriate	Check work as it develops and modify their approach in light of progress

Opinion and influence ALL PROJECTS	Describe others' work, including work professional craftspeople and designers and say what they like and dislike about it.	Describe similarities and differences between own and others' work including work by professional craftspeople and designers	Compare and contrast great bridge designs, explaining why a particular design is significant in engineering history	Describe the work of a favourite fashion designer and explain what they like his/her designs	Research the work done by textile artists and say what they like about a piece identifying the techniques and materials used in creating and the aesthetic value	Research cultural traditions and evidence their influence in their own work
Existing product evaluation ALL PROJECTS	Describe how an existing product works (e.g. 'the toy moves when I turn the handle').	Investigate a range of existing products and say if they do what they are supposed to do	Investigate the design features (including identifying components or ingredients) of familiar existing products	Explain how existing product is useful to the user	Investigate the design feature (including identifying components or ingredients) of a familiar existing product in the context of culture or society in which it was designed or made	Explain the form and function of familiar existing products
Evaluation ALL PROJECTS	Talk about their own and others' work identifying strengths or weaknesses.	Explain how closely, finished products, meet their design criteria and say what they could do better in the future	Suggest improvements to products made and describe how to implement them (taking the views of others into account)	Identify what has worked well and what could be improved, evidencing and explaining the results of research	Test and evaluate products against a detailed design specification and make adaptations as they develop the product	Demonstrate modifications made to a product, as a result of on-going evaluation by themselves and others
History and culture	Order products or designs chronologically and begin to explain reasons why they are ordered in that way.	Describe why a design, building or designer is important	Explain the impact of a design or designer on design history and how this has helped to shape the world	Explain how fashion and fabrics have changed over time and how this has affected fashion. Explain how the design of a product has changed over time	Create a timeline to sequence the development of a design over time and describe how technology has influenced it	Describe how an individual in the field of design and technology has helped and shape the world.