

Core skills	Year-group					
	Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum Designing	Pupils should be taught to: <ul style="list-style-type: none"> 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 		Pupils should be taught to: <ul style="list-style-type: none"> 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 Designing, Understanding contexts, users and purposes	Begin to think about the purpose of the design and the intended user. Begin to explore materials, make templates and mock ups. Begin to generate own ideas for design by drawing on own experiences or from reading. Talk about their design ideas and what they are making. <u>Key Vocab</u> develop, features, model, product, purpose, template	State the purpose of the design and the intended user. Explore materials, make templates and mock ups. Generate own ideas for design by drawing on own experiences or from reading. Develop and communicate ideas by talking and drawing. <u>Key Vocab</u> appeal, characteristics, function, generate, mock ups, prototypes, users	Begin to gather information about the needs and wants of particular individuals and groups. Begin to develop their own design criteria and use these to inform their ideas. Begin to research designs. Share and clarify ideas through discussion Model their ideas using prototypes and pattern pieces Use annotated sketches, some cross-sectional drawings and diagrams	Gather information about the needs and wants of particular individuals and groups. Develop their own design criteria and use these to inform their ideas. Research designs. Model ideas using prototypes and pattern pieces. Use annotated sketches, some cross-sectional drawings to develop and communicate ideas. Generate realistic ideas, focusing on the needs of the user. Make design decisions that take account of the availability of resources.	Carry out research, using surveys, interviews, questionnaires and web-based resources. Identify the needs, wants, preferences and values of particular individuals and groups. Develop a simple design specification to guide their thinking. Recognise when their products have to fulfil conflicting requirements. Generate innovative ideas, drawing on research Make design decisions, taking account of constraints such as time, resources and cost Use annotated sketches, cross-sectional drawings, exploded diagrams and computer-aided design packages, to develop and communicate ideas	Carry out research, using surveys, interviews, questionnaires and web-based resources. Identify the needs, wants, preferences and values of particular individuals and groups. Develop a detailed design specification to guide their thinking. Recognise when their products have to fulfil conflicting requirements. Generate innovative ideas, drawing on research Make design decisions, taking account of constraints such as time, resources and cost Use annotated sketches, cross-sectional drawings, exploded diagrams and computer-aided design packages, to develop and communicate ideas
National Curriculum Making	Pupils should be taught to: <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks [e.g. 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. 		Pupils should be taught to: <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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. <p><i>Follow procedures for safety</i> <i>Use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components</i></p>			
Making	Follow procedures for safety. Begin to use and make own templates. Begin to measure, mark out, cut out and shape materials and components (supported if needed) Begin to assemble, join and combine materials and components (supported if needed) Use simple fixing materials e.g. temporary – paper clips tape and permanent – glue, staples Use finishing techniques (including those from art and design) <u>Key Vocab</u> cutting, equipment, ingredients, joining, materials, tool	Follow procedures for safety. Use and make own templates. Measure, mark out, cut out and shape materials and components. Assemble, join and combine materials and components. Explain reasons for choice of fixing materials. Think carefully about finishing techniques (including those from art and design) <u>Key Vocab</u> assembling, components, construction, finishing, mechanism, mock up, shaping, textiles	Begin to 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, include those from art and design, with some accuracy.	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, include those from art and design, with some accuracy.	Accurately measure to nearest cm/mm, mark out, cut and shape materials and components. Accurately assemble, join and combine materials/components. Accurately apply a range of finishing techniques, including those from art and design. Demonstrate resourcefulness, e.g. make refinements.	Accurately measure to nearest mm, mark out, cut and shape materials and components. Use techniques that involve a number of steps. Accurately assemble, join and combine materials/components. Accurately apply a range of finishing techniques, including those from art and design. Refine design and explain reasons for refinement.

NC Evaluating	Pupils should be taught to: <ul style="list-style-type: none"> explore and evaluate a range of existing products. evaluate their ideas and products against design criteria. 		Pupils should be taught to: <ul style="list-style-type: none"> 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. <p><i>Investigate - 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 and how well products meet user needs and wants</i></p>			
Evaluating Existing products	Begin to investigate and understand - what products are, who they are for, how they are made and what materials are used. Key Vocab evaluate, suitable	Investigate - what products are, who they are for, how they are made and what materials are used	Investigate - who designed and made the products, where products were designed and made, when products were designed and made and whether products can be recycled or reused	Investigate and analyse: who designed the products; where products were designed and made; when products were designed and made; whether products can be recycled or re-used.	Investigate - how much products cost to make, how innovative products are and how sustainable the materials in products are	Investigate and analyse: 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.
Evaluating Own ideas and products	Suggest how their products could be improved Key Vocab test, stiffer, strong, weak	Make simple judgements about their products and ideas against design criteria Evaluating products and components used	Identify the strengths and weaknesses of their ideas and products Consider the views of others, including intended users, to improve their work	Identify the strengths and areas for development in their ideas and products. Consider the views of others, including intended users, to improve their work. Use their design criteria to evaluate and improve their completed products.	Identify the strengths and areas for development in their ideas and products. Use their design criteria to evaluate and improve their completed products. Critically evaluate the quality of the design, manufacture and fitness for purpose of their products. Evaluate their ideas and products against their original design specification.	Confidently identify the strengths and areas for development in their ideas and products. Use their design criteria to evaluate and improve their completed products. Critically evaluate the quality of the design, manufacture and fitness for purpose of their products. Evaluate their ideas and products against their original design specification.
NC Technical Knowledge	Pupils should be taught to: <ul style="list-style-type: none"> build structures, exploring how they can be made stronger, stiffer and more stable. explore and use mechanisms [e.g. levers, sliders, wheels and axles], in their products. 		Pupils should be taught to: <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures. understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors] apply their understanding of computing to program, monitor and control their products. <p><i>Understand how to use learning from science and maths to help design and make products that work</i> <i>Know that materials have both functional properties and aesthetic qualities</i> <i>Know that materials can be combined and mixed to create more useful characteristics</i> <i>Know that mechanical and electrical systems have an input, process and output</i> <i>Use the correct technical vocabulary for the projects they are undertaking</i></p>			
Technical knowledge	Understand about the simple working characteristics of materials and components. Understand about the movement of simple mechanisms: levers, sliders. Understand how freestanding structures can be made stronger, stiffer and more stable. Key Vocab Cutting, joining, lever, masking tape, paper fastener/split pin, pull, push, up, down, straight, shaping, simple slider, slot, straight line. Axles, names of equipment and materials used, stable, stiffen, strengthen, wheels.	Understand about the simple working characteristics of materials and components. Understand about the movement of simple mechanisms: wheels and axles. Key Vocab Mechanical systems axles, chassis body cab, fixed free moving, mechanism, names of tools, equipment and materials used, stability, vehicle axle holder	Understand how levers and linkages create movement. Know how to make strong, stiff shell structures. Know that a single fabric shape can be used to make a 3D textiles product.	Understand how pneumatic systems create movement. Understand how simple electrical circuits and components can be used to create functional products.	Understand how cams, pulleys and gears create movement. Know how to reinforce/strengthen a 3D framework. Know that a 3D textiles product can be made from a combination of fabric shapes.	Understand how more complex electrical circuits and components can be used to create functional products. Understand how to program a computer to control their products. Understand how to program a computer to monitor changes in the environment / control their products.
National Curriculum Cooking and Nutrition	Pupils should be taught to: <ul style="list-style-type: none"> use the basic principles of a healthy and varied diet to prepare dishes. understand where food comes from. 		Pupils should be taught to: <ul style="list-style-type: none"> 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. <p><i>How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source</i> <i>How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</i></p>			
Cooking and Nutrition	Know where food comes from all food comes from plants or animals	Know where food comes from food has to be farmed, grown elsewhere (e.g. at home) or caught	Know that food is: grown (such as tomatoes, wheat and potatoes)	Know that seasons may affect the food available	Understand how food is processed into ingredients that can be eaten or used in cooking.	Know that a recipe can be adapted by adding or substituting one or more ingredients.

Where food comes from			reared (such as pigs, chickens and cattle) caught (such as fish) in the UK, Europe and the wider world	Know that food ingredients can be fresh, pre-cooked and processed		
Cooking and Nutrition Food Preparation	Prepare simple dishes safely and hygienically, without using a heat sources Use techniques such as cutting Name and sort foods into the five groups of the 'eat well' plate	Use appropriate equipment to weigh and measure ingredients Know that everyone should eat at least five portions of fruit and vegetables every day Understand that food ingredients should be combined according to their sensory characteristics	Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'eat well' plate Measure using grams	Know that to be active and healthy, food is needed to provide energy for the body Follow a recipe	Know that different foods contain different substances - nutrients, water and fibre - that are needed for health Understand the need for correct storage Measure accurately	Know that recipes can be adapted to change the appearance, taste, texture and aroma Work out ratios in recipes