Design and Technology

Please indicate when an objective has been covered:

Bold - covered once

<u>Underline and bold</u> - covered twice

Add a unit title and brief description of each project undertaken, including key skills and equipment.

Please view those already added by other year groups before adding another, to avoid unwanted repetition.

Milestones in italics	To design	To make	To evaluate	To increase technical knowledge	Cooking and nutrition
Year One	• [begin to] design purposeful, appealing products for themselves based on design criteria • [begin to] generate, develop, model and communicate their ideas through talking, drawing and, where appropriate, information and communication technology	• [begin to] select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] • [begin to] select from and use a range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	• [begin to] explore and evaluate a range of existing products • [begin to] evaluate their ideas and products against design criteria	• **build structures, exploring how they can be made stronger, stiffer and more stable**	• *cut, peel or grate ingredients safely and hygienically* • *assemble or cook ingredients* (following the basic principles of a healthy diet)
Year Two	• design purposeful, **functional**, appealing products for themselves **and other users** based on design criteria • generate, develop, model and communicate their ideas through talking, drawing, **mock-ups** and, where appropriate, information and communication technology	• 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	• explore and evaluate a range of existing products • evaluate their ideas and products against design criteria	• build structures, exploring how they can be made stronger, stiffer and more stable • **explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.**	• (Linked to Science units) **use the basic principles of a healthy and varied diet to prepare dishes** • **understand where food comes from.**

Milestones in italics	To design	To make	To evaluate	To increase technical knowledge	Cooking and nutrition
Year Three	• 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	• 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	• 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	• **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 apply the principles of a healthy and varied diet** • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
Year Four	• 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	• 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	• 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	• understand and use mechanical systems in their products [for example, gears, pulleys, levers and linkages (cams in Y5)] • **apply their understanding of computing to program, monitor and control their products.**	• 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.**

Milestones in italics	**To design**	**To make**	**To evaluate**	**To increase technical knowledge**	**Cooking and nutrition**
Year Five	• 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	• 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	• 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	• 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]	• prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques (applying the principles of a healthy and varied diet). • **understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.**
Year Six	• 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	• 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	• 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	• apply their understanding of how to strengthen, stiffen and reinforce more complex structures • **understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]**	• prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques (applying the principles of a healthy and varied diet)