**Design Technology whole school overview**

Y1 topics

Autumn term – Moving Pictures

Spring term – Delightful decorations

Summer term – Teddy Bears picnic

Y2 topics

Autumn term – Vehicles

Spring term – Perfect pizzas

Summer term – Flying kites

Y3 topics

Autumn term – Photograph frames

Spring term – Moving monsters

Summer term – Sandwich snacks

Y4 topics

Autumn term – Storybooks

Spring term – Torches

Summer term – British inventors

Y5 topics

Autumn term – Bread

Spring term – Chinese inventions

Summer term – Building bridges

Y6 topics

Autumn term – Great British dishes

Summer term – Fairground

Spiral curriculum:

Food technology – Y1 – Teddy bears picnic/ Y2 – Perfect pizzas/ Y3 – Sandwich snacks\*/ Y5 – Bread\*/ Y6 – Great British dishes

Mechanisms – Y1 – Moving pictures\*/ Y2 – Vehicles/ Kite flying^/ Y3 – Moving monsters/ Y4 – Storybooks\*/ Y5 – Chinese inventions^/ Y6 - Fairground

Structures – Y3 - Photograph frames/ Y4 – British inventors\*/ Y5 – Building bridges\*/ Y5 – Chinese inventions\*/ Y6 - Fairground

Electrical systems – Y4 – Torches\*/ Y6 – Fairground\*

Architecture – Y5 – Building bridges

Textiles – Y1 – Delightful decorations

**Curriculum programmes of study links**

Design Make Evaluate Technical knowledge

Cooking and nutrition

Y1 – Delightful decorations

* KS1 - design purposeful, functional, appealing products for themselves and other users based on design criteria
* KS1 - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
* KS1 - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing
* KS1 - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
* KS1 - explore and evaluate a range of existing products
* KS1 - evaluate their ideas and products against design criteria

Y1 – Moving pictures

* KS1 - design purposeful, functional, appealing products for themselves and other users based on design criteria
* KS1 - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
* KS1 - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing
* KS1 - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
* KS1 - explore and evaluate a range of existing products
* KS1 - evaluate their ideas and products against design criteria
* KS1 - explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products

Y1 – Teddy bears picnic

* KS1 - evaluate their ideas and products against design criteria
* KS1 - use the basic principles of a healthy and varied diet to prepare dishes
* KS1 - understand where food comes from

Y2 – Vehicles

* KS1 - design purposeful, functional, appealing products for themselves and other users based on design criteria
* KS1 - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
* KS1 - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing
* KS1 - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
* KS1 - explore and evaluate a range of existing products
* KS1 - evaluate their ideas and products against design criteria
* KS1 - explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products

Y2 – Perfect pizzas

* KS1 - design purposeful, functional, appealing products for themselves and other users based on design criteria
* KS1 - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
* KS1 - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing
* KS1 - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
* KS1 - explore and evaluate a range of existing products
* KS1 - evaluate their ideas and products against design criteria
* KS1 - use the basic principles of a healthy and varied diet to prepare dishes
* KS1 - understand where food comes from

Y2 – Flying kites

* KS1 - design purposeful, functional, appealing products for themselves and other users based on design criteria
* KS1 - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
* KS1 - evaluate their ideas and products against design criteria

Y3 – Photograph frames

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
* KS2 - 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
* KS2 - investigate and analyse a range of existing products
* KS2 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
* KS2 - apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Y3 – Moving monsters

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
* KS2 - 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
* KS2 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
* KS2 - understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

Y3 – Sandwich snacks

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - 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
* KS2 - investigate and analyse a range of existing products
* KS2 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
* KS2 - understand and apply the principles of a healthy and varied diet
* KS2 - prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

Y4 – British inventors

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - understand how key events and individuals in design and technology have helped shape the world
* KS2 - apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Y4 – Torches

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
* KS2 - 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
* KS2 - investigate and analyse a range of existing products
* KS2 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
* KS2 - understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]

Y4 – Storybooks

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
* KS2 - 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
* KS2 - investigate and analyse a range of existing products
* KS2 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
* KS2 - understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

Y5 – Bread

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - 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
* KS2 - investigate and analyse a range of existing products
* KS2 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
* KS2 - understand and apply the principles of a healthy and varied diet
* KS2 - prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

Y5 – Chinese inventions

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - 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
* KS2 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
* KS2 - understand how key events and individuals in design and technology have helped shape the world
* KS2 - understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

Y5 – Building bridges

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
* KS2 - apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Y6 – Great British dishes

* KS2 - understand and apply the principles of a healthy and varied diet
* KS2 - prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
* KS2 - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

Y6 - Fairground

* KS2 - 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
* KS2 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
* KS2 - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
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* KS2 - understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
* KS2 - understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]