



**Fir Tree Junior School
Design and Technology**

The programme of study in Design and Technology as set out in the National Curriculum for year 3-6 covers learning the skills and knowledge to design, make and evaluate and develop their technological knowledge including learning about healthy eating through cooking and nutrition

There are some overlaps where objectives are taught over two years, for example in year 3 and 4 and in year 5 and 6. This is to allow teachers to teach and consolidate learning

Design & Technology in Year 3

Design

Our children will learn to:

- 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

Make

Our children will learn to:

- select from and use a wider range of tools and equipment to perform practical tasks 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

Evaluate

Our children will learn to:

- 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

Technological Knowledge

Our children will learn to:

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems [for example, gears, pulleys, cams, levers and linkages] in their products
- understand and use electrical systems [for example, series circuits incorporating switches, bulbs, buzzers and motors] in their products
- apply their understanding of computing to programme, monitor and control their products.

Cooking & Nutrition

Our children will learn to:

- understand and apply the principles of a healthy and varied diet
- cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet

Design & Technology in Year 4

Design

Our children will learn to:

- 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

Make

Our children will learn to:

- select from and use a wider range of tools and equipment to perform practical tasks 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

Evaluate

Our children will learn to:

- 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

Technological Knowledge

Our children will learn to:

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use electrical systems [for example, series circuits incorporating switches, bulbs, buzzers and motors] in their products
- understand and use electrical systems [for example, series circuits incorporating switches, bulbs, buzzers and motors] in their products
- apply their understanding of computing to programme, monitor and control their products

Cooking & Nutrition

Our children will learn to:

- understand and apply the principles of a healthy and varied diet
- cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet

Design & Technology in Year 5

Design

Our children will learn to:

- 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

Make

Our children will learn to:

- select from and use a wider range of tools and equipment to perform practical tasks 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

Evaluate

Our children will learn to:

- 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

Technological Knowledge

Our children will learn to:

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems [for example, gears, pulleys, cams, levers and linkages] in their products
- understand and use electrical systems [for example, series circuits incorporating switches, bulbs, buzzers and motors] in their products
- apply their understanding of computing to programme, monitor and control their products.

Cooking & Nutrition

Our children will learn to:

- become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]
- understand the source, seasonality and characteristics of a range of ingredients

Design & Technology in Year 6

Design

Our children will learn to:

- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

Our children will learn to:

- 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

Evaluate

Our children will learn to:

- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work **Yr4/5/6**
- understand how key events and individuals in design and technology have helped shape the world **Yr5/6**

Technological Knowledge

Our children will learn to:

- understand and use mechanical systems [for example, gears, pulleys, cams, levers and linkages] in their products
- understand and use electrical systems [for example, series circuits incorporating switches, bulbs, buzzers and motors] in their products
- apply their understanding of computing to programme, monitor and control their products

Cooking & Nutrition

Our children will learn to:

- become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]
- understand the source, seasonality and characteristics of a broad range of ingredients