

Design and technology LTP NEW

	Autumn	SPRING	Summer	
Early Years	Food- tasting , making Construction kits- free play, Paper and card – scissors, glue, hole punch; levers and linkages – paper fastener and joins, pop ups Textiles – cut fabric, threading techniques Wide range of materials; working in small groups and independently with guidance; structured activities			
Y1	MECHANISMS Moving pictures Make select from and use a range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing Knowledge -explore and use mechanisms, such as levers, sliders, in their product	STRUCTURE Animal homes Knowledge -build structures, exploring how they can be made stronger, stiffer and more stable Make select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	Food – Fruit kebab Make - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	
Y2	TEXTILES – puppets Make -select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	MECHANISMS – Vehicles Knowledge - explore and use mechanisms such as wheels and axles, in their product	FOOD – Seasonal Soup make -select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	
Y3	FOOD – sandwich snacks Make -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	CONTROL MECHANISM – Moving monsters understand and use mechanical systems in their products, such as gears, pulleys , cams, levers and linkages; apply their understanding of computing to programme, monitor and control their products	STRUCTURES – photograph frames Make -select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately	
Y4	CONTROL – Pop up cards Make select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately	TEXTILES – Pencil Cases Make select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately	CONTROL – electric games Knowledge - apply their understanding of computing to programme, monitor and control their products Knowledge -understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and	
Y5	FOOD – Seasonal/frozen? Make range of materials and components, including ingredients, according to their functional properties and aesthetic qualities	STRUCTURE/MECHANISM- Packaging for food Knowledge -apply their understanding of how to strengthen, stiffen and reinforce more complex structures	MECHANISM- CAMs Knowledge -understand and use mechanical systems in their products, such as gears, pulleys , cams, levers and linkages	
Y6	STRUCTURE - Knowledge -apply their understanding of how to strengthen, stiffen and reinforce more complex structures; Knowledge - apply their understanding of computing to programme, monitor and control their products	COOKING – Mountain Snacks Make range of materials and components, including ingredients, according to their functional properties and aesthetic qualities	TEXTILES - Bags Make range of materials and components, including textiles according to their functional properties and aesthetic qualities	

Key stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts, such as the home and school, gardens and playgrounds, the local community, industry and the wider environment.

When designing and making, pupils should be taught to:

Design

- 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

Make

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

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms, such as levers, sliders, wheels and axles, in their product

Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.

When designing and making, pupils should be taught to:

Design

- 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

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

Evaluate

- 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**

Technical knowledge

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

