

	Autumn	Spring	Summer
Base1			
EYFS	Expressive arts and Design	Creating with Materials	Fine Motor Skills
Cycle 1 (Year 1)	Food Preparing fruit and vegetables	Structures Free standing	Mechanisms Sliders and levers
	Fruit Kebabs	House for Princess Pearl and Prince Gadabout- Link to English	Moving part for story book/ Father's day card
Base2			
Cycle 1 (Year 2)	Mechanisms Wheels and axles	Food Preparing fruit and vegetables (including cooking and nutrition requirements for KS2)	Textiles Templates and joining techniques
Scaldfordising the Planning		Fruit and vegetable salad	
Cycle B (Year 3)	Structures Shell structure using computer aided design	Food Healthy and varied diet including cooking and nutrition requirements for KS2)	Textiles 2D shape to 3D product
Scaldfordising the Planning	Gift box for Christmas cooking- Using CAD	Making a healthy sandwich /wrap or toastie	Making a cushion
Base 3			
Cycle A	Mechanical Systems levers and linkages	Electrical systems Simple programming and control and crumble controller	Food Healthy and varied diet (including cooking and nutrition requirements for KS2)
Scaldfordising the Planning	Making a moving Christmas card	Making a torch	Healthy Dips- Hummus/ Takaki
Cycle B	Food Celebrating culture and seasonality (including cooking and nutrition for KS2)	Structures Frame Structures	Mechanical Systems Cams or pulleys and Gears
Scaldfordising the Planning		Mask Mount	
Cycle C	Food Celebrating culture and seasonality (including cooking and nutrition for KS2)	Electrical systems Monitor and control eg crumble controller	Textiles Using Computer aided design in textiles+

Scaffoldising the Planning	Flavoured bread rolls as an alternative to hot cross buns	Moon buggies	Making pencil cases and using CAD
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Long Term Plan D and T Scalford School January 2023

Rationale for the sequence of units

The children are taught units around the 6 key technical areas

- Structures
- Mechanisms
- Food
- Electrical Systems
- Mechanical Systems
- Textiles

The skills, knowledge and understanding taught is progressive over time.

Structures

In B1 the children are introduced to basic structures, this is built on in B2 when 'shell structures' are taught. These are slightly more sophisticated and require a greater degree of accuracy when cutting out or drawing the 'net'. When 'shell structures' are returned to in B3, the children require an increasing degree of skill, particularly looking at different joining techniques and a variety of materials are also used.

Mechanisms

In B1 basic mechanisms are introduced to the children, these are typical ones that children may experience with their toys at home. The children therefore leave KS1 being able to make sliders, levers, wheels and axels.

In lower KS2, two more concepts are introduced, pneumatics and levers and linkages. Levers and linkages in particular builds on the learning of sliders and leavers.

In upper KS2 a further aspect is now introduced, 'cams'.

Food

In KS1 Food is introduced to Y1 children. Very simple projects involving fruit and vegetables are created, none of which require cooking. In lower KS2 the children's design skills are developed further as part of their designs they plan to assemble a number of ingredients together to form a particular product.

In upper KS2 Food is now linked to a particular theme, requiring designs that are more sophisticated. Cooking is also required for some of the products produced.

Electrical Systems

Electrical systems are first introduced in lower KS2, linking closely to the knowledge already gained from the Science curriculum. Simple switches and circuits are used in the designs which leads to more complex switches and circuits in upper KS2, perhaps including more than one input and possibly a parallel circuit.

Textiles

Templates and simple joining techniques are used in KS1. These are built on in lower KS2 where 3D products are first introduced, using 2D templates and designs. Combining different fabrics and therefore producing a more sophisticated product moves learning on further in upper KS2. The extra dimension of the use of CAD in designs is introduced in Year 6.