

KS2 Knowledge and Skills – Design & Technology

Knowledge and Skills	Year/Topic
Aims	
Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world	
Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users	
Critique, evaluate and test their ideas and products and the work of others	
Understand and apply the principles of nutrition and learn how to cook	
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	Year A, Summer 1, Year B, Autumn 1, Explorers and Expeditions Year B, Spring 1, Make Do and Mend Year A, Summer 2, Who Let the Gods Out?
	Year A, Spring 1, Battery Operated Lights Year A, Spring 2, Musical Instruments Year B, Summer 1, Levers & Linkages
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	Year A, Summer 1, Year B, Autumn 1, Explorers and Expeditions Year B, Spring 1, Make do and Mend Year A, Summer 2, Who Let the Gods Out?
	Year A, Spring 1, Battery Operated Lights Year A, Spring 2, Musical Instruments Year B, Summer 1, Levers & Linkages
Make	
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	Year A, Summer 1, Year B, Autumn 1, Explorers and Expeditions Year B, Spring 1, Make do and Mend Year A, Summer 2, Who Let the Gods Out?
	Year A, Spring 1, Battery Operated Lights Year A, Spring 2, Musical Instruments Year B, Summer 1, Levers & Linkages
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	Year A, Summer 1, Year B, Autumn 1, Explorers and Expeditions Year B, Spring 1, Make do and Mend Year A, Summer 2, Who Let the Gods Out?
	Year A, Spring 1, Battery Operated Lights Year A, Spring 2, Musical Instruments Year B, Summer 1, Levers & Linkages
Evaluate	
Investigate and analyse a range of existing products	Year A, Summer 1, Year B, Autumn 1, Explorers and Expeditions Year B, Spring 2, Make do and Mend Year A, Summer 2, Who Let the Dogs Out?

	Year A, Spring 1, Battery Operated Lights Year A, Spring 2, Musical Instruments Year B, Summer 1, Levers & Linkages
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	Year A, Summer 1, Weaving Bookmarks Year B, Autumn 1, Moving Toys Year B, Summer 2, Shelters
	Year A, Spring 1, Battery Operated Lights Year A, Spring 2, Musical Instruments Year B, Summer 1, Levers & Linkages
Understand how key events and individuals in design and technology have helped shape the world	Year B, Autumn 1, Moving Toys Year B, Summer 2, Shelters Year B, Autumn 2 History, Victorians
	Year A, Spring 1, Battery Operated Lights Year A, Spring 2, Musical Instruments Year B, Summer 1, Levers & Linkages
Technical Knowledge	
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	Year B, Autumn 1, Moving Toys Year B, Summer 2, Shelters
	Year A, Spring 2, Musical Instruments Year B, Summer 1, Levers & Linkages
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	Year B, Autumn 1, Moving Toys
	Year B, Summer 1, Levers & Linkages
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]	Year B, Summer 2, Shelters with Lights
	Year A, Spring 1, Battery Operated Lights
Apply their understanding of computing to program, monitor and control their products.	Year A, Spring 1, Battery Operated Lights
Cooking and Nutrition	
Understand and apply the principles of a healthy and varied diet	Year A, Summer 2, Greek Dips
	Year A, Summer 2, Healthy Menu Year B Autumn 1, Global Food Year B Summer 2, Edible Garden
Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques	Year B, Spring 1, Bread
	Year A, Summer 2, Greek Dips
	Year B, Autumn 1, Global Food Year B, Summer 2, Edible Garden
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed	Year A, Summer 2, Greek Dips
	Year B, Autumn 1, Global Food Year B, Summer 2, Edible Garden