

	Term 1	Term 2	Term 3
Unit of work	Electrical Systems - Simple programming and control	Food - Healthy and Varied diet	Mechanical systems – Levers and linkages
Composite Knowledge	-What is a program? -How can we create a simple program? -How can we create a program with a control aspect?	-What is culture and seasonality? -What different techniques can we use? -How can we understand the nutritional value of a product? -What functions do different utensils have?	-Which part of the card is the linkage/lever? -Which are the fixed pivots and which are the loose pivots?
Component knowledge	-Explain and describe what a program is and observe programs in the school environment. -Observe and construct a simple program.	-Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. -Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. -Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. -Know how to use appropriate equipment and utensils to prepare and combine food.	-Identify successfully levers and linkages in systems -Identify fixed and loose pivots in a mechanical system
National Curriculum KS2 (skills)	<u>Design</u> 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 <u>Make</u> select from and use a wider range of tools and equipment to perform practical tasks [for example, 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 <u>Evaluate</u> 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 [for example, gears, pulleys, cams, levers and linkages] understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] apply their understanding of computing to program, monitor and control their products.		
Vocabulary	series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, light emitting diode (LED), bulb, bulb holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device, output device, process user, purpose, function, prototype, design criteria, innovative, appealing, design brief	texture, taste, sweet, sour, appearance, smell, preference, fresh hygienic, edible, grown, frozen, tinned, processed, seasonal, harvested healthy/varied diet planning, design criteria, purpose, user, annotated sketch, sensory evaluations	mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating user, purpose, function prototype, design criteria, innovative, appealing, design brief
Links to prior knowledge	Constructed a simple series electrical circuit, using bulbs, batteries, switches and buzzers. • Cut and joined a variety of construction materials, such as wood, card, plastic, reclaimed materials and glue	Know some ways to prepare ingredients safely and hygienically. • Have some basic knowledge and understanding about healthy eating and <i>The Eatwell Guide</i> . • Have used some equipment and utensils and prepared and combined ingredients to make a product.	Explored and used mechanisms such as flaps, sliders and levers. Gained experience of basic cutting, joining and finishing techniques with paper and card.