

## • Design and Technology: Year 3

### National Curriculum Links:

- **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 [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
- **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 [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.

### Sequence of lessons:

<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
<u>Cooking &amp; Nutrition: Eating Seasonally</u>	<u>Structures: Constructing a Castle</u>	<u>Electrical systems: Electric Poster</u>
To explain why food comes from different places around the world	To recognise how multiple shapes (2D and 3D) are combined to form a strong and stable structure	To understand the purpose of information design
To explain the benefits of seasonal foods	To design a castle	To research a set topic to develop a range of initial ideas
To develop cutting and peeling skills	To construct 3D nets	To develop an initial idea into a final design
To evaluate seasonal ingredients	To construct and evaluate my final product	To assemble my final product and incorporate a simple circuit
To design a mock-up using criteria		
To evaluate a dish		

### Key vocabulary:

Arid, Climate, Complementary, Country, Export, Import, Mediterranean, Mock-up, Mountain, Peel, Polar, Seasonal, Seasons, Snip, Temperate, Texture, Tropical, Weather	2D shapes, 3D shapes, Castle, Design criteria, Evaluate, Façade, Feature, Flag, Net, Recyclable, Scoring, Stable, Strong, Structure, Tab, Weak	Battery, Bulb, Circuit, Circuit component, Crocodile wires, Electrical product, Electrical system, Final design, Information design, Initial ideas, Peer assessment, Research, Self-assessment, Sketch
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