

## Year 4 Design & Technology

In Key Stage 2 children are taught to:

- 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
- 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
- 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
- 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.
- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

### **Year 4 Topics:**

#### **Harry Potter**

- Look at the design of real life towers
- Look at materials and their properties
- Design, make and test a Quidditch Tower
- Evaluate their design, suggest improvements and (time permitting) redesign

#### **The Day the Crayons Quit**

- Design, make and use crayon puppets, sewing fabric for the body and making a marionette frame to which puppet is attached.

#### **Dragons: Fact or Fiction?**

- Test the properties of materials by making castles from a variety of (unconventional) materials and testing these under 'enemy attack'.