The Laurels Primary School
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# Design & Technology | Curriculum Map

| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|---|
| Year R | | **Structures:**<br>**Junk modelling**<br>In this unit, pupils explore and learn about various types of permanent and temporary join. They are encouraged to tinker using a combination of materials and joining techniques in the junk modelling area. | | **Textiles:**<br>**Bookmarks**<br>Pupils develop and practise threading and weaving techniques using various materials and objects. They look at the history of the bookmark from Victorian times versus modern-day styles. The pupils apply their knowledge and skills to design and sew their own bookmarks. | | **Structure:**<br>**Boats**<br>In this unit, children explore what is meant by 'waterproof', 'floating' and 'sinking', then experiment and make predictions with various materials to carry out a series of tests. They learn about the different features of boats and ships before investigating their shape and structures to build their own. |
| Year 1 | **Structures:**<br>**Constructing windmills**<br>Inspired by the song, 'Mouse in a windmill', children design, decorate and build a windmill for their mouse client to live in, developing an understanding of different types of windmill, how they work and their key features. | | **Textiles:**<br>**Puppets**<br>Explore methods of joining fabric. Design and make a character-based hand puppet using a preferred joining technique, before decorating. | | **Cooking and nutrition:**<br>**Fruit and vegetables**<br>Learn to distinguish between fruit and vegetables and where they grow. Design a fruit and vegetable smoothie and accompanying packaging. | |
| Year 2 | | **Structures:**<br>**Baby bear's chair**<br>Explore stability and methods to strengthen structures, to understand Baby Bear's chair weaknesses and develop an improved solution for him to use. | | **Mechanisms:**<br>**Fairground wheel**<br>Design and create a functional Ferris wheel, learn how different components fit together so that the wheel rotates and the structure stands freely. | | **Mechanisms:**<br>**Making a moving monster**<br>Explore levers, linkages and pivots through existing products and experimentation, use this research to construct and assemble a moving monster. |
| Year 3 | **Cooking and nutrition:**<br>**Eating seasonally**<br>Learn about various fruits and vegetables, and when, where and why they are grown in different seasons. Discover the relationship between colour and health benefits. | | **Structures:**<br>**Constructing a castle**<br>Identify and learn about the key features of a castle, before designing and making a recycled-material castle (structure). | | **Textiles:**<br>**Cross-stitch and appliqué**<br>Learn and apply two new sewing techniques – cross-stitch and appliqué. Utilise these new skills to design and make a cushion or Egyptian collar. | |
| Year 4 | | **Structures:**<br>**Pavilions**<br>Investigate and model frame structures to improve their stability, then apply this research to design and create a stable, decorated pavilion. | | **Mechanical systems:**<br>**Making a slingshot car**<br>Using a range of materials, design and make a car with a working slingshot mechanism and house the mechanism using a range of nets. | | **Electrical systems:**<br>**Torches**<br>Identify the difference between electrical and electronic products. Evaluate a range of existing torches and their features, then develop a new functional torch design. |
| Year 5 | **Electrical systems:**<br>**Doodlers**<br>Explore how the design cycle can be approached at a different starting point, by investigating an existing product, which uses a motor, to encourage pupils to problem-solve and work out how the product has been constructed, ready to develop their own. | | **Mechanical systems:**<br>**Making a pop-up book**<br>Create a functional four-page pop-up storybook design, using lever, sliders, layers and spacers to create paper-based mechanisms. | | **Cooking and nutrition:**<br>**What could be healthier?**<br>Discover the farm to fork process, understand the key welfare issues for rearing cattle. Compare the nutritional value of existing sauces and develop a healthier recipe. | |
| Year 6 | | **Textiles:**<br>**Waistcoats**<br>Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, children design, assemble and decorate a waistcoat for a chosen purpose. | | **Structures:**<br>**Playgrounds**<br>Research existing playground equipment and their different forms, before designing and developing a range of apparatus to meet a list of specified design criteria. | | **Digital world:**<br>**Navigating the world**<br>Design and program a navigation tool to produce a multifunctional device for trekkers using CAD 3D modelling software. Pitch and explain the product to a guest panel. |