

Design & Technology Curriculum Pathway

Secondary School

Cooking and Nutrition: Come Dine With Me



Children develop a three-course menu focused on three key ingredients, as part of a paired challenge to develop the best class recipes. They explore each key ingredient's farm to fork process.

Digital world: Navigating the World



Children design and program a navigation tool to produce a multifunctional device for trekkers using CAD 3D modelling software. They pitch and explain the product to a guest panel.

Mechanical systems: Automata Toys



Children develop a functional automata window display, to meet the requirements in a design brief. They explore and create cam, follower and axle mechanisms to mimic different movements.

Structures: Playgrounds (Eco Towns)



Children research existing playground equipment and their different forms, before designing and developing a range of apparatus to meet a list of specified design criteria.

Year 6

Mechanical Systems: Making a Slingshot Car (Moon Buggy)



Children use a range of materials, design and make a car with a working slingshot mechanism and house the mechanism using a range of nets.

Structure: Bridges



Children test and analyse various types of bridge to determine their strength and stability. They explore material properties and sources, before marking, sawing and assembling a wooden truss bridge.

Mechanical systems: Making a Pop-Up Book



Children create a functional four-page pop-up storybook design, using lever, sliders, layers and spacers to create paper-based mechanisms.

Year 5

Textiles: Fastenings



Children analyse and evaluate a range of existing fastenings and then devise a list of design criteria to design, generate templates and make a fabric book sleeve.

Digital world: Mindful Moments Timer



Children explore what is meant by mindfulness and write design criteria to fulfil a brief to develop a programmed product for timing a mindful moment. They including the use of virtual Micro:Bit.

Structure: Pavilions



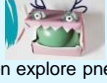
Children investigate and model frame structures to improve their stability, then apply this research to design and create a stable, decorated pavilion.

Textiles: Cushions



Children learn and apply two new sewing techniques – cross-stitch and appliqué. They utilise these new skills to design and make a cushion.

Mechanical Systems: Pneumatic Toys



Children explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams.

Cooking and nutrition: Developing a Recipe



Children learn about various fruits and vegetables, and when, where and why they are grown in different seasons. They learn about seasonal foods and create a seasonal food tart.

Year 4

Textiles: Pouches



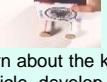
Children learn how to sew a running stitch ready to design, make and decorate a pouch using a template.

Structures: Constructing a Castle



Children identify and learn about the key features of a castle, before designing and making a recycled-material castle (structure).

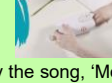
Mechanisms: Wheels and Axles



Children learn about the key parts of a wheeled vehicle, develop an understanding of how wheels, axles and axle holders work. They design and make a moving vehicle.

Year 3

Structures: Constructing a Windmill



Inspired by the song, 'Mouse in a Windmill', children design and construct a windmill for a client (the mouse) to live in. Children explore various types of windmill, how they work and their key features.

Mechanisms: Making a Moving Story Book



Children explore slider mechanisms and the movement they output, to design, make and evaluate a moving storybook from a range of templates.

Textiles: Puppets



Children explore methods of joining fabric. They design and make a character-based hand puppet using a preferred joining technique, before decorating.

Year 2

Structures: Boats



In this unit, children explore what is meant by 'waterproof', 'floating' and 'sinking'. Then, they 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.

Structures: Junk Modelling



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.

Year 1

Cooking and Nutrition: Soup



In this unit, children explore the differences between fruits and vegetables using their senses (taste, touch, smell, sight, sound). They listen to the story 'The Best Pumpkin Soup' and discuss the key ingredients the characters used before developing a class-based vegetable soup recipe.

Year R