

Design Technology Overview and Intent – Crackley Bank Primary School

	Autumn	Spring	Summer
Nursery	Joining, Constructing and Creating	Building, Constructing and Problem-Solving	Designing, Constructing and Creating Models
Reception	Designing, Making and Joining	Construction and Creating for a Purpose	Textiles and Creating Products
Year 1	Mechanisms - Sliders and levers Moving Pictures (basic slider and one-point lever)	Structures - Freestanding structures Playgrounds or Homes (frames from straws and strengthen with triangles)	Food - Preparing fruit and vegetables (including cooking and nutrition requirements for KS1) Eat More Fruit and Veg (Fruit Salad/Kebabs)
Year 2	Mechanisms - Wheels and axles Vehicles or Winding Up (wheels and axles)	Food (additional focus due to context) - Preparing fruit and vegetables (including cooking and nutrition requirements for KS1) Eat More Fruit and Veg (Vegetable salad to accompany ready-made main dish e.g. quiche)	Textiles - Templates and joining techniques Puppets or Coat/T-shirt for teddy (Joining identical 2D shapes)
Year 3	Mechanical Systems - pneumatics Moving Monsters	Structures - Shell structures (including computer-aided design) Packaging (nets)	Food - Healthy and varied diet (including cooking and nutrition requirements for KS2) Sandwich Snacks (making simple fillings – combining ingredients) Picnic
Year 4	Mechanical Systems - Levers and linkages Storybooks (complex linkages and levers)	Electrical Systems - Simple circuits and switches (including programming and control) Alarms or torches	Textiles - 2-D shape to 3-D product Money Containers (2D to 3D product)
Year 5	Mechanical Systems - Pulleys or gears Moving Toys (cams)	Structures - Frame structures Shelters	Food - Celebrating culture and seasonality (including cooking and nutrition requirements for KS2) Bread or Biscuits
Year 6	Textiles - Combining different fabric shapes (including computer-aided design) Christmas gift bags	Food - Celebrating culture and seasonality (including cooking and nutrition requirements for KS2) Prepare and cook a predominately savoury meal using a range of cooking techniques.	Electrical Systems More complex switches and circuits (including programming, monitoring and control) Fairgrounds or Controllable Vehicles

Design & Technology at Our School

At our school, Design & Technology (D&T) plays a vital role in equipping children with a wide range of transferable skills. Through hands-on learning, children learn to plan, design, create and evaluate products with a real purpose, while developing and applying technical knowledge.

Our D&T curriculum is carefully structured around five key areas: **mechanisms, structures, food, textiles, and electrical systems**. Each area is revisited and built upon over time, ensuring children gain both practical experience and the confidence to use these skills in real-life contexts.

Mechanisms - Children begin by exploring basic mechanisms, which then develop into mechanical systems. By Year 6, this knowledge supports the creation of more complex projects, such as controllable vehicles or fairground rides. Mechanisms are revisited regularly because they connect directly to industry and everyday life skills, forming the foundation for later work in structures and electrical systems.

Structures - Every two years, children return to structures, starting with simple models made from straws and strengthened with triangles. As they progress, they explore nets and frames, leading up to designing and building shelters in Year 5. Mechanisms often link closely with this area—for example, incorporating moving parts into structures such as doors in an alarm system. A highlight is the Year 6 residential trip, where children put their knowledge into practice with den building—an exciting, real-life application of their learning.

Food - Healthy eating and active lifestyles are priorities in our school. That's why food is revisited regularly throughout the curriculum. From learning about nutrition to preparing simple meals, children gain both knowledge and practical experience that they can apply at home to support lifelong healthy choices.

Textiles - Textile projects give children the opportunity to develop fine motor skills and creativity. They learn simple sewing techniques, explore folding to create 3D products, and follow patterns to produce everyday items. These practical skills are not only valuable for life but can also enhance their learning in subjects such as Art.

Electrical Systems - Electrical systems give children the chance to apply their scientific knowledge in a practical way. In Year 4, they consolidate their understanding of circuits by creating simple electrical products. By Year 6, they are able to design and construct more advanced projects, adding speed, sound and light. These units highlight clear links with industry, construction, and future careers while also developing vital life skills.

Through this carefully designed curriculum, our children gain the confidence, knowledge and creativity to solve problems, take risks and succeed in both school and beyond.

