Wolborough CE Nursery and Primary School
Design and Technology Curriculum

Our curriculum statements are designed to be used as a supportive tool to plan teaching and learning across our school. The key skills are derived from the National Curriculum and split into individual year groups to support a progressive rolling programme.

Curriculum Overview

At Wolborough Church of England Primary, we utilise Cornerstones Education's subject scheme to deliver the Design and Technology curriculum. We have organised the scheme so that DT projects are delivered in a two-year rolling programme in half-termly blocks across the year. The design and technology projects are well sequenced to provide a coherent subject scheme that develops children's designing, planning, making and evaluating skills. Each project is based on a design and technology subject focus, including structures, mechanisms, cooking and nutrition, or textiles. The design and technology curriculum's electronic systems and IT monitoring and control elements are explicitly taught in our science projects to ensure the links between the subjects are highlighted. Where possible, meaningful links to other areas of the curriculum have been made. For example, the cooking and nutrition project Eat the Seasons is taught alongside the geography project Sow, Grow and Farm. All the projects follow a structure where children are introduced to key concepts and build up knowledge and skills over time, using a more comprehensive range of equipment and building, cutting, joining, finishing and cooking techniques as they progress through school. All projects contain focused, practical tasks in the Develop stage to help children gain the knowledge and skills needed to complete their Innovate tasks independently. Throughout Key Stages 1 and 2, children build up their knowledge and understanding of the iterative design process. They design, make, test and evaluate their products to match specific design criteria and ensure they fit their purpose. Throughout the projects, children are taught to work hygienically and safely

Links with EYFS

The DT curriculum begins as soon as the children start school in the EYFS. Learning in DT links to the EYFS Statutory Educational Programme: Expressive Art and Design. The activities and enhanced provision in our early years curriculum provide children with the opportunity to construct and create with a range of materials. They are encouraged to work collaboratively and use a range of small and large-scale construction kits to create models. They are introduced to joining techniques and explore products to inspire their own designs. Throughout their time in the EYFS they build essential knowledge and understanding that they will apply in DT in KS1.

Key Stage 1

Children learn about food sources, begin to follow recipes and learn simple cooking techniques in the projects Chop, Slice and Mash and Remarkable Recipes. The projects Shad and Shelter and Beach Hut develop their knowledge of structures, and children learn to cut, join and strengthen wood for the first time. Children learn the term ‘mechanism’ and assemble and test wheels and axles in the project Taxi! They also explore using sliders, levers and linkages in the project Push and pull

Lower Key Stage 2

In Lower KS2, children continue to learn about food, understanding the concept of a balanced diet and making healthy meals in the projects Cook Well, Eatwell and Fresh Food, Good Food. They extend their understanding of mechanisms by exploring cams and using joining and finishing techniques to make automaton toys. They learn about six simple machines and use their knowledge to create a lifting or moving device prototype in the project Tomb Builders. Children design and build a greenhouse, using their understanding of opacity and transparency and the needs of plants from science learning to inform their design. They explore textiles, learning about the work of William Morris before designing, embellishing and finishing a fabric sample. They also explore and use electrical systems and IT

monitoring and control in the science project Electrical Circuits and Conductors for the first time.

Upper Key Stage 2
Children continue to explore food and nutrition, learning about seasonal foods and the benefits of eating seasonally. They also learn about processed and whole foods in the project Food for Life, creating healthy menus from unprocessed foods. Children deepen their understanding of mechanisms by studying pneumatic systems in the project Moving Mechanisms. They learn about the forces at play and create a prototype for a functional, pneumatic machine. Children learn more about structures in the project Architecture, studying the history of architecture and developing new ways to create structural strength and stability. They use computer-aided design and consolidate their making skills to produce scale models. In the project Engineer, children consolidate their knowledge of structures, joining and strengthening techniques and electrical systems by completing a bridge-building challenge. They extend their knowledge of textiles by learning new stitches to join fabrics and using pattern pieces to create a range of products.

Vocabulary
Children's command of vocabulary is fundamental to learning and progress across the curriculum. Vocabulary is developed actively, building systematically on pupil's current knowledge and deepening their understanding of etymology and morphology (word origins and structures) to increase their store of words. Simultaneously, pupils make links between known and new vocabulary and discuss and apply shades of meaning. In this way, children expand the vocabulary choices that are available to them. It is essential to introduce technical vocabulary which define each curriculum subject. Vocabulary development is underpinned by an oracy culture and a tiered approach. High value is placed on the conscious, purposeful selection of well-chosen vocabulary and appropriate sentence structure to enrich access to learning and feed into written work across the curriculum.

KS1 A	Shade and Shelter	Remarkable Recipes	Beach Hut
	Absorbent, clay, den, design criteria, durable, fabric, flexible, glass, material, metal, opaque, permanent, plastic, shade, shelter, stone, strong, tarpaulin, temporary transparent, waterproof, wood	Beef, chop, design criteria, edible, equipment, grate, ingredients, lamb, mash, mixed diet, mutton, peel, pork, preserves, pulses, recipe, slice, vegan diet, vegetarian diet	Apex roof, beach hut, bench hook, butt joint, cladding, design criteria, frame structure, G-clamp, junior hacksaw, mitre joint, sand, score, stilts, strengthen, triangular corner
KS1 B	**Push and Pull**	**Taxi**	**Chop, Slice, Mash**
	Arc, bar, component, design criteria, fixed pivot, guide, lever, linkage, machine, mechanism, moving pivot, pivot, slider, slit, split pin	Axle, chassis, design criteria, dowel, fixed axle, moving axle, passenger, taxi, vehicle, washer, wheel	Chop, dairy, flowering head, fruit, grate, leaf, mash, peel, root, salad, salad dressing, seed, slice, stem, tear, texture, tool

Lower KS2 A	Fresh Food, Good Food	Greenhouse	Tombe Builders
	Best before date, canning, chop, cling film, decay, design criteria, drying food poisoning, freezing, grate, healthy snack, mash,	Biome (Eden Project), butt join, cloche, cold frame, conservatory, design criteria, diagonal strut, frame structure, greenhouse, hot glue gun,	Compound machine, effort, first-class lever, force, friction, fulcrum, inclined plane, lever, load, prototype, pulley, pyramid, rigidity,

	microorganism, net, packaging, pasteurising, peel, pickling, preservation, refrigerating, salting, slice, tear, Tetra Pak, Tupperware, use by date	plastic, rigid, stability, strength, translucent, transparent, triangular corner, vent	score, screw, second-class lever, simple machine, third-class lever, wedge, wheel and axle
Lower KS2 B	**Cook well, eat well**	**Making It Move**	**Functional and Fancy Fabric**
	Bake, barbecue, boil, calcium, carbohydrate, design criteria, Eatwell Guide, fry, grill, microwave, mineral, nutrient, protein, ratatouille, roast, simmer, slow, cook	Automaton, axle, cam, circular cam, design criteria, follower, heart cam, lever, linkage, machine, mechanism, pear cam, rotation, slider, snail cam, wheel	Applique, block printing, breathable, colour palette, cotton ,denim, design criteria, durable, embellishment, embroider, fabric, Gore-Tex, hem, industry, lace, leather, Lycra, motif, natural fabric, nylon, polyester, synthetic fabric, versatile, wool, woven

Upper KS 2 A	**Make Do and Mend**	**Eat the Seasons**	**Engineer**
	Bias binding, blanket stitch, bunting, coupon, darn, fastening, ration book, rationing, recycle, running stitch, tacking stitch, utility, whip stitch	Balanced diet, boil, carbon footprint, dice, food hygiene, grate, import, nutritional value, peel, saute, seasonality, steam	Abutment, aqueduct, arch, arch bridge, beam, beam bridge, bridge, compression, concertina, distort, engineer, iron, span, steel, support pier, suspension bridge, tension, truss, truss bridge
Upper KS2	**Moving mechanisms**	**Food for Life**	**Architecture**
	Actuator, compress, compressor, deflate, force, gas, inflate, jack, lever, liquid, nozzle, particle, piston, plunger, pneumatic systems, pneumatics, pressure, reservoir, solid, syringe, system, valve	Additive, flavouring, knead, minimally processed food, organic food, pasteurise, preservative, processed food, prove, shelf life, ultra-processed food, unprocessed food, whole food, yeast	Architecture, capital, caryatids, column, computer-aided design, Corinthian column, cornice, Doric column, entablature, fluting, frieze, Ionic column, limestone, lintel, marble, pediment, post and lintel, stability, stiffness, support