



Design Technology at Headcorn Primary School

INTENT

At Headcorn, we envision a Design Technology curriculum that ignites innovation, promotes inclusivity, and fosters resilience in our students. Rooted in the Cornerstones curriculum, our DT program is designed to inspire aspiration, celebrate diversity, and encourage resilience, empowering our pupils to become confident, creative, and resourceful individuals ready to tackle real-world challenges. Our aim is to enable our children to take risks and become innovative, capable citizens who will make an essential contribution to the creativity, culture, wealth and well-being of the modern Britain.

Aspiration:

We aspire to cultivate aspiring designers and innovators who dream big and believe in their ability to make a positive impact through design. Our DT curriculum encourages students to think critically, explore possibilities, and develop innovative solutions to real-world problems. Through hands-on projects and design challenges, we inspire students to set ambitious goals and pursue their passions with determination and creativity. Our children learn how to use different resources, materials and tools to be innovative and enterprising. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. Pupils are encouraged to take risks in their designs, finding new approaches to looking at problems. They become reflective and resilient, overcoming challenges and refining designs, and apply their speaking and listening skills to listen to the ideas of others and adapt their own thinking based on what they hear and see.

Inclusion:

Diversity is at the heart of our DT curriculum. We celebrate the diversity of perspectives, experiences, and talents that students bring to the design process. Our lessons incorporate a wide range of cultural influences, technological advancements, and design practices from around the world. By embracing diverse perspectives and collaborative teamwork, we foster an inclusive learning environment where every student's voice is valued and respected.

Resilience:

Designing and creating often involve facing setbacks and overcoming obstacles. Our curriculum emphasizes the importance of resilience in the design process. Students learn to adapt to change, iterate on their designs, and learn from failure as they work towards achieving their goals. Through iterative design cycles and reflective practice, we empower students to persevere through challenges, learn from mistakes, and grow as resilient designers and problem solvers. Through our DT program, inspired by these values, we provide students with authentic and meaningful design experiences. We nurture their creativity, cultivate their problem-solving skills, and foster their resilience as they design and create solutions to real-world problems.

Implementation

EYFS

We begin Design and Technology in Reception classes, and we find this to be a key part of the Expressive Arts and Design and Physical Development. Within the continuous provision at Early Years and DT projects, our children in EYFS will have opportunities to explore the making of products using a wide variety of materials. They will learn to use several techniques including cutting, sticking, drawing and painting. The chance to practise their cutting skills is permanently on offer. The children will be encouraged to develop their use of a range of small tools, including scissors, paintbrushes



and cutlery. The children will also be provided with opportunities to prepare food, including the cooking of food. Through the child initiative approach, the children will be given the provision to practise freely through personalised tasks set up in designated learning areas such as construction, creative table, small world or role play area.

Key Stage 1

In the autumn term of Year 1, children begin to learn about structures in the project Shade and Shelter before designing and making a shelter. In the spring term project Taxi! they learn the term 'mechanism' and assemble and test wheels and axles. In the summer term, children begin to learn about food sources in the project Chop, Slice and Mash and use simple preparation techniques to create a supermarket sandwich.

In the autumn term of Year 2, children learn more about food in the project Remarkable Recipes, where they find out about food sources, follow recipes and learn simple cooking techniques. In the spring term project Beach Hut, children develop their knowledge of structures further, learning to cut, join and strengthen wood for the first time. In the summer term, children begin to develop their understanding of textiles in Cut, Stitch and Join. They learn to sew a simple running stitch, use pattern pieces and add simple embellishments. They also continue to learn about mechanisms in the project Push and Pull by using sliders, levers and linkages in products.

Lower Key Stage 2

In the autumn term of Year 3, children continue to learn about food, understanding the concept of a balanced diet and making healthy meals in the project Cook Well, Eatwell. In the spring term project Making it Move, children extend their understanding of mechanisms by exploring cams and using joining and finishing techniques to make automaton toys. In the summer term project Greenhouse, they continue to develop their knowledge of structures, using triangles and braces for strength. They design and build a greenhouse, using their understanding of opacity and transparency and the needs of plants from science learning to inform their design.

In the autumn term of Year 4, children continue to develop their understanding of food in the project Fresh Food, Good Food. They learn about food safety and preservation technologies before designing and making packaging for a healthy snack. During the spring term project Functional and Fancy Fabrics, children continue to explore textiles, learning about the work of William Morris before designing, embellishing, and finishing a fabric sample. In the summer term project Tomb Builders, they build on their knowledge of mechanisms, learning about six simple machines and using their knowledge to create a lifting or moving device prototype. 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

In the autumn term of Year 5, 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. In the spring term project Eat the Seasons, children continue to explore food and nutrition, learning about seasonal foods and the benefits of eating seasonally. In the summer term, they 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. They also explore the electrical conductivity of materials before making products incorporating circuits in the science project Properties and Changes of Materials.

In the autumn term of Year 6, children learn about processed and whole foods in the project Food for Life, creating healthy menus from unprocessed foods. In the spring term project Engineer, children consolidate their knowledge of structures, joining and strengthening techniques and electrical systems by completing a bridge-building challenge. In the summer term project Make Do



and Mend, they extend their knowledge of textiles by learning new stitches to join fabrics and using pattern pieces to create a range of products