Design & Technology – Curriculum Overview (Years 7–13)

Our Vision

Design & Technology at Benton Park School is a creative and practical subject that teaches students how to design, make and evaluate purposeful products. From Year 7 through to A-Level, students build confidence, independence, and technical knowledge by solving real-world problems. They learn how to design for users, use tools and machinery safely, and develop their ideas through sketching, modelling and Computer-Aided Design (CAD). D&T equips students with valuable life skills, while also preparing them for careers in engineering, architecture, product design, fashion, and food science.

Key Stage 3 (Years 7–9): Building Confidence and Practical Skills

Year 7 – First Steps in Product Design and Food

What they learn: Students complete rotations in Product Design and Food. They are introduced to safe tool use, basic workshop skills, and simple design techniques. In Food, they learn hygiene, nutrition, and basic cooking methods.

Why it matters: This foundation builds core practical skills and introduces students to design thinking, healthy eating, and safe working practices.

Year 8 – Exploring Product Design and Textiles

What they learn: Students rotate through Product Design and Textiles. They develop more complex making skills, such as using workshop machinery and sewing machines. In Product Design, they explore mechanisms, sustainability, and user-focused design. In Textiles, they design and make soft toys using hand and machine stitching.

Why it matters: Students apply creative thinking to practical problems and learn to analyse, evaluate, and reflect on their design decisions.

Year 9 – Designing for Real Users (Product Design, Textiles and Food)

What they learn: Students rotate through Product Design, Textiles, and Food. They complete advanced projects such as eco homes, sustainable textiles, and culturally themed cooking. Projects involve user research, CAD, modelling, and technical skills development.

Why it matters: Year 9 builds independence and prepares students for GCSE-level study by deepening their understanding of materials, nutrition, sustainability, and user needs.

Key Stage 4 (Years 10–11): Applying Technical Knowledge and Design Thinking

Product Design / Textiles (AQA Design & Technology GCSE)

Year 10 – Core Technical Principles and Practical Projects

What they learn: Students explore materials, mechanisms, energy, sustainability, and manufacturing processes. Projects include the "marble run" and a toy design task. They learn CAD and begin developing ideas for their GCSE NEA.

Why it matters: This builds essential knowledge and hands-on experience needed for both the exam and coursework. Students gain confidence in design and problem-solving.

Year 11 – Major Project (NEA) and Exam Preparation

What they learn: Students complete their NEA (Non-Exam Assessment), designing and making a product for a real-world user. This includes research, modelling, prototyping, and evaluation. They also revise for their final exam.

Why it matters: The NEA is worth 50% of the GCSE grade. It allows students to showcase their creativity and skills in a meaningful, independent project.

Food Preparation & Nutrition (AQA Food GCSE)

Year 10 – Food Science and Cooking Skills

What they learn: Students study nutrition, food science, food safety, and cultural food traditions. Practical tasks develop skills in preparing a wide range of dishes and using kitchen equipment safely and effectively.

Why it matters: Students understand how food choices impact health and gain life-long cooking and planning skills.

Year 11 – NEA and Final Exam

What they learn: Students complete two NEA tasks: one scientific food investigation and one practical 3-dish menu. They also prepare for the written exam on nutrition, food science, and safety.

Why it matters: Students demonstrate their ability to apply theory to practical challenges and gain qualifications relevant to careers in food science, catering, and health.

Key Stage 5 (Years 12–13): A-Level Product Design (AQA)

Year 12 – Advanced Design Knowledge and Practice

What they learn: Students study materials, sustainability, manufacturing processes, and design theory. They begin their NEA with user research and specification writing. Topics include industrial processes, CAD/CAM, and inclusive design.

Why it matters: Students build a deep understanding of professional design processes and begin working with increasing independence on complex design challenges.

Year 13 – Major Project and Commercial Awareness

What they learn: Students complete their NEA project, working with a real client. They also study commercial manufacture, enterprise, intellectual property, and feasibility studies.

Why it matters: Students develop project management, problem-solving and communication skills needed for further study or creative industries.

Why This Subject Matters

• Problem Solving: Students learn to approach design challenges with creativity and purpose.

• Technical Confidence: From tools to digital software, students build a broad and adaptable skillset.

• Life Skills: From healthy cooking to sustainable making, students gain confidence and independence.

• Career Pathways: D&T opens doors to engineering, fashion, food science, architecture, and design.