

OCL Design & Technology Curriculum: Statement of Intent

Purpose of study

We begin with the assumption that all children have a right to study a broad D&T curriculum that challenges them creatively, stretches them academically and inspires them by engaging with, and making contributions to solving real-world problems, for example living sustainably. We live in a hugely complex, highly designed world in which almost every facet has been subject to the work of Designers and/or Engineers of all specialities. Both Design and Technology are fundamental to being human and all learners should develop their understanding of our world and the ways in which we impact society and the planet.

Our unified Design & Technology curriculum encompasses D&T and Cooking & Nutrition, recognising that nutrition, preparation, and consumption are fundamental aspects of human-centred design. While Cooking & Nutrition has distinct characteristics—involving sensory evaluation, nutritional science, and cultural significance—we believe it is most powerfully understood as part of the broader D&T discipline, aligning with the National Curriculum's integrated approach.

We aim to ignite students' curiosity, foster their critical thinking abilities, and nurture their design and technological skills across all contexts—from digital solutions to sustainable products to nutritious meals. By integrating real-world challenges and working through an iterative design process, we enable students to apply their learning to varied contexts, making meaningful connections between substantive and procedural knowledge and practice. We will thoughtfully and intentionally leverage the best digital technologies to support designing and making activities across all domains.

Our curriculum places emphasis on interdisciplinary collaboration, encouraging students to work together and leverage their diverse strengths. We strive to create an inclusive and supportive learning environment where every student feels valued and empowered to explore their passions and interests. Through Design & Technology we can help learners make "better" and more responsible decisions, to inspire students, provide them with valuable career paths, and empower them to make a positive impact on society, culture, and the environment.

We value character, competence, and community in our curriculum:

Character: We develop this by engaging all pupils in D&T that fosters creativity, leverages collaboration, and develops resilience, with the aim of growing agency to make authentic design decisions across all contexts—from sustainable product design to healthy meal planning.

Competence: We develop pupils' confidence in using a design process, even in the face of ambiguity, and encourage them to take well-judged and safe risks. This ensures that all are equally well prepared for further study in related areas of Design, Technology, Engineering, Hospitality, Construction and Food Science, if they choose.



Community: We inspire all pupils to develop a lifelong appreciation and understanding of their designed world, to value "good" design in all its forms—from ergonomic tools to balanced diets. We ensure all students experience and explore the power of design to positively impact their community, planet, and society, and conversely to recognise the negative aspects of 'poor' or unethical, or 'cynical' design.

Responsibility: We cultivate responsible decision-making across all aspects of D&T—from judicious material selection and waste reduction in manufacturing, to informed food choices that support personal health and environmental sustainability. Students learn to consider the full lifecycle impact of their design decisions, whether creating products or planning meals.

Core concepts in OCL Design & Technology:

Concept:	Definition:
Designing	The thoughtful, intentional sequence of activities to generate ideas across all design contexts, including food product development and recipe modification .
Making (manufacture)	The deliberate processing of materials, ingredients or parts into products using tools, human endeavour and machinery/equipment. This includes both traditional manufacturing and food preparation techniques.
Designing and making	The process of realising, in physical form, a part - or all - of a design.
Considering consequences of D&T	The past, present and future consequences (intended and unintended) of D&T activities on individuals, health, society, the economy and the planet. This includes understanding the impact of food choices on personal health, food systems, and environmental sustainability.
Technical knowledge	How functionality is achieved through powering, controlling, structuring, mechanisms and systems. In food contexts, this includes understanding cooking methods and nutritional science.
Materials	The properties, sources, footprint and longevity of materials and ingredients. Sustainability issues across all design contexts, from manufacturing materials to food sourcing and production methods.
Responsibility	The ethical obligation to make informed, sustainable, and health-conscious decisions in all design activities, considering impact on self, others, and the environment.

OCL D&T Curriculum end points:

Through our carefully sequenced and ambitious curriculum we intend that our varied and diverse D&T education provision will achieve these outcomes:

To equip all students with the **designing** skills and techniques to ensure students can:

D1 Select and apply appropriate design thinking tools and techniques in response to design challenges across all contexts, carefully considering issues of sustainability, health, and responsibility (consumption, climate damage, nutritional impact, etc).

D2 Work confidently in the face of ambiguity, taking well-judged creative risks in both product design and food development.

D3 Embrace working through an iterative design process, including using digital tools for design, analysis, and nutritional planning.

To equip all students with the knowledge and skills to ensure students can **make** with:

M1 An understanding of the range of materials, tools, ingredients and processes available to designers, engineers, and food developers.

M2 An appreciation of the huge complexity, precision and skills in manufactured products and food systems.

M3 The skills and confidence to both prototype and make finished products, including using digital technologies and demonstrating competence in food preparation techniques.

To equip all students with **designing and making** knowledge and skills to ensure students have:

DM1 A mastery of a range of different designing and making approaches.

DM2 A mindset to make pragmatic compromises based on how decisions will affect form, functionality, taste, nutritional value, and environmental impact.

DM3 A skillset to apply an iterative design process to design and create prototypes, including recipe testing.

To provide students opportunities to understand the **wider consequences** of D&T related activities through:

WC1 Multiple opportunities to undertake product analysis and system evaluation, to develop a deep appreciation of the complexity of the manufactured world, food supply chains, and their impact on the planet.

WC2 Working through case studies of iconic designs, diverse designers, and food innovation, to foster an understanding of how design decisions impact form, function, health, and furthermore society, the economy and the environment.

WC3 Activities that frame Design as a "superpower" to meaningfully impact people's lives and the planet, including the power of "good food" design to address sustainability, and cultural preservation.

To equip all students with the **technical knowledge** to ensure students can:

TK1 Achieve functioning solutions through creating structures, powering/controlling and changing movement and forces, and understanding food science principles.

TK2 Develop responsive systems that add functionality, including understanding preservation, fermentation, and cooking techniques.

TK3 Apply technical knowledge from other contexts (within and beyond D&T) to help solve design problems, including applying scientific principles to food preparation and nutrition.

To develop an understanding of **materials**, including ingredients and components:

Mat1 Understand, explore and apply significant working properties of materials and ingredients, including nutritional properties and sensory characteristics.

Mat2 Explore sources, footprint and longevity of materials and ingredients, including understanding sustainable farming, ethical sourcing, and seasonal eating.

Mat3 Justify material and ingredient selections based on functional, aesthetic, nutritional, and environmental criteria.

Responsibility Thread Throughout D&T:

Our curriculum is unified by a powerful thread of **responsibility** that runs through all aspects of Design & Technology:

- **Responsible Material Use:** Understanding the environmental impact of material choices, waste reduction, and designing for longevity
- **Responsible Food Choices:** Making informed decisions about nutrition, sourcing, seasonality, and cultural sensitivity
- **Responsible Design Decisions:** Considering the full lifecycle impact of products and systems on health, society, and environment
- **Responsible Innovation:** Using design thinking to address real-world problems with sustainable, ethical solutions
- **Responsible Consumption:** Understanding the impact of our choices as both designers and consumers

To enable all students to develop their character, confidence and identity through D&T, evidenced by:

- A lifelong love of D&T and the confidence to make “good” (responsible) decisions about the things they design and consume.
- A belief that they can implement changes they want to see through the power of Design.
- Resilience to learn and apply knowledge, as well as take critique and evaluate both process and outcomes effectively.
- Empathy, sensitivity, understanding and openness of user (and stakeholder) needs and wants.
- Confidence, collaboration and leadership skills.
- An understanding of D&T’s unique role in shaping individuals, society, culture and the environment.