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.

We aim to ignite students' curiosity, foster their critical thinking abilities, and nurture their design and technological skills. 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.

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" 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.

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 prepared for further study in related areas of Design, Technology and Engineering, if they choose.

Community: We inspire all pupils to develop a lifelong appreciation and understanding of their designed world, to value "good" design. 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 on the beforementioned.

Core concepts in OCL Design & Technology:

Concept:	Definition:
Designing	The thoughtful, intentional sequence of activities to generate ideas.
Making (manufacture)	The deliberate processing of materials, ingredients or parts into products using tools, human endeavour and machinery / equipment.
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.
Technical knowledge	How functionality is achieved through powering, controlling, structuring, mechanisms and systems.
Materials	The properties, sources, footprint and longevity of materials. Sustainability issues.

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, carefully considering issues of sustainability 9consumption, climate damage etc).
D2   Work confidently in the face of ambiguity, taking well-judged creative risks.
D3   To embrace working through an iterative design process, including using digital tools.

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 and engineers.
M2   An appreciation of the huge complexity, precision and skills in manufactured products.
M3   The skills and confidence to both prototype and make finished products, including using digital technologies.

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 and impact the environment.

DM3   A skillset to apply an iterative design process to design and create prototypes.

To provide students opportunities to understand the **wider consequence**s of D&T related activities through:
WC 1   Multiple opportunities to undertake product analysis, to develop a deep appreciation of the complexity of the manufactured world and its impact on the planet.
WC2   Working through case studies of iconic designs and diverse designers, to foster an understanding of how design decisions impact form and function, 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.

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
TK2   Develop responsive systems that add functionality
TK3   Apply technical knowledge from other contexts (within and beyond D&T) to help solve design problems

To develop an understanding of **materials,** including ingredients and components:
Mat1   Understand, explore and apply significant working properties of materials
Mat2   Explore sources, footprint and longevity of materials.
Mat3   To justify material selections

To enable all students to develop their character, confidence and identity through D&T, evidenced by:
- A lifelong love of D&T.
- 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.