St Cecilia's RC High School
Curriculum Delivery

Discover, Develop, Rejoice

Design & Technology Curriculum intent

"Everything is designed. Few things are designed well." — **Brian Reed**

The Design & Technology curriculum at St Cecilia's furnishes pupils with the knowledge and skills to design and make a wide range of products, encouraging the use of imagination, creativity and ingenuity to develop solutions for real-world problems for real people taking into account the different needs, wants and values of individuals. They are taught technical and practical skills that enable them to complete everyday tasks with confidence and competence enabling them to engage successfully with modern technology.

Pupils are taught to recognise the overlap with other disciplines such as mathematics, science, computing and art and through coherence with these curricula, pupils further develop and transfer knowledge and skills across subjects

Pupils are provided the opportunity to design and make prototypes and products, they are taught to understand and apply principles of nutrition and the skills to cook balanced meals. Pupils are also encouraged to critique, evaluate and test their ideas and products and the work of others through peer and self-assessment.

*"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." – **D&T N***

Strategic Intent for Design & Technology Curriculum Area

To develop a curriculum which:

- Design concepts are sequenced in such a way that they progressively build upon one another. This begins with an understanding of the core principles in Design & Technology, e.g. 'What are manufacturing processes?' The scheme of learning makes links to prior knowledge, whether it be from the previous lesson, everyday knowledge or a previous key stage. The schemes are built in a way that pupils can see the relevance in learning D&T so that they are fascinated by the world of Design around them. Projects have a fluidity that will be used to engage pupils in areas that interest them and that build on previous skills-based learning.

- The Design & Technology, curriculum area builds in video and picture links and embeds them into objectives slides, referencing local industry/films/TV programmes as well as cross curricular links to aid understanding and cognitive pathways for students to build upon and relate to.

- We build upon practical skills and knowledge of local designers, engineers and trades, links with colleges and apprenticeships and identify these within schemes and lessons. These are to be used within learning to enable students to see local opportunities and successes and, have the opportunity to question these people regarding starting their own journeys. Subject knowledge within projects will lead on from KS2 with all staff aware of what students should have/have experienced in primary school. Awareness of what has been covered at primary built by annual visits to main feeder schools.

- Key words are consistently identified within each lesson and referenced in order to build understanding. There is an expectation in all classes that terminology is modelled and broken down to reinforce technical principles. Contextual awareness is developed with the use of specific terms to show differences between subject matter and pathways allowing students an insight into multiple design possibilities and stimulating their interest. There are reading opportunities in every lesson on top of St Cecilia's whole school reading strategies. The use of current magazines, online articles discussing current affairs, text books or even just objectives

- Reading to themselves or aloud by students will impact and build on reading skills, communication and understanding.

- The Design & Technology Curriculum Area schemes and lessons build on theory, revisit past learning and support the retrieval of information and mastery of key skills. **Rosenshine's** 10 principles, cognitive load theory and growth mind-set will underpin daily practice to help student's gain the most from their experience. Targeted questioning, verbal dialogue with students and theory questions will be consistently used by teaching staff and consolidated by practical work.

- Imagery is used heavily in lessons and lengthy descriptions of processes cut to a minimum to embed the fundamentals and not to overload pupils. Strategies such as our developed objective slides based on cognitive load theory is used in all lessons to enhance pupil's awareness of learning. Metacognition is interwoven throughout lessons and informs students of their learning and increase awareness of recall and retrieval of information. Visual aids are used to stimulate independent thinking and anchor key points and terminology. These are currently being developed and will be used throughout schemes.

- Projects are aimed at cultural understanding and designing for a particular set of needs, skill-based learning in all subjects to enhance knowledge and understanding of key concepts and practical skills.

Curriculum Principles

- We prioritise depth of knowledge. The faculty intend to prioritise mastery of skills and focus on the skills with common tools, equipment and media. The design principles that underpin all of our teaching as well as cultural understanding, are taught in depth so that students can interpret them in their own way fitting them to different contexts.

- Mathematical concepts are taught throughout the DT curriculum to support maths curriculum and prepare students for DT GCSE course content. Literacy focus made explicit on objective slides to incorporate whole school strategy and support analytical, evaluative and instructional writing alongside detailed annotation within faculty.

- Studies into different contextual challenges across DT impacts on the student's knowledge of their community and awareness of individual needs. These starting points are fundamental to the subjects we teach and form the projects that students undertake mimicking the design industry. There is an increased focus on the local area with attention drawn to real issues/design work/opportunities.

- We believe that the arts and creative subjects are crucial in forming well-rounded and confident young people.

- We will develop annual visits to local and national companies to enhance cultural and local awareness. We plan to make learning relevant by embedding current technological issues both within our locality and the wider world. Consistently referencing real world problems in the areas of design and manufacturing and making these explicit throughout lessons

- We intend to build on links with local colleges including apprenticeship opportunities and local work places to raise student aspirations and provide real links for our young people's futures.

- We intend to address key terminology and oracy through planned lesson objectives to support the increased rigour in exam questions. Current articles and technological advances to form starter activities through the reading and discussion of current issues. E.g. magazine articles, online news websites. Reading will be in each and every lesson so that pupil's gain confidence with literacy, communication and oracy.

- We intend to demand the highest level of work and verbal responses by students constantly making reference to standards and life after St Cecilia's. These life skills will be promoted within lessons and enhance the learning of the pupils.

- We use opportunities for cross-curricular work to develop transferable skills and to allow pupils to see the links across a range of areas.

- We intend to cross reference most subject areas within our curriculum and tailor KS4 practical tasks around them.

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