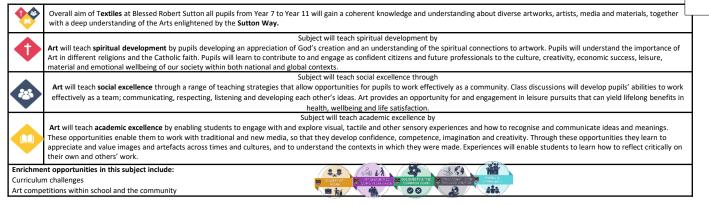
KS4 Curriculum Intent for Product Design at Blessed Robert Sutton Catholic Voluntary Academy



KS4 CGSE Design & Technology

' GCSE Design and Technology will prepare students to participate confidently and successfully in an increasingly technological world. Students will gain awareness and learn from wider influences on Design and Technology including historical, social, cultural, environmental and economic factors. Students will get the opportunity to work creatively when designing and making and apply technical and practical expertise.

Our GCSE allows students to study core technical and designing and making principles, including a broad range of design processes, materials techniques and equipment. They will also have the opportunity to study specialist technical principles in greater depth...

This specification encourages students to:

- actively engage in the creative process of art, craft and design in order to develop as effective and independent learners, and as critical and reflective thinkers with enquiring minds
- develop creative, imaginative and intuitive capabilities when exploring and making images, artefacts and products
- become confident in taking risks and learn from experience when exploring and experimenting with ideas, processes, media, materials and techniques
- develop critical understanding through investigative, analytical, experimental, practical, technical and expressive skills
- develop and refine ideas and proposals, personal outcomes or solutions with increasing independence

<u>Assessment</u>

Students will be assessed through a personal learning checklist for each unit of work, grading their progress based on a RAG rating and a teacher digital tracker. A formal assessment of each unit will take place using the GCSE assessment objectives.

Exam: 50% of qualification: 100 marks

Section A – Core technical principles (20 marks)

A mixture of multiple choice and short answer questions assessing a breadth of technical knowledge and understanding.

Section B – Specialist technical principles (30 marks)

Several short answer questions (2-5 marks) and one extended response to assess a more in-depth knowledge of technical principles.

Section C - Designing and making principles (50 marks)

A mixture of short answer and extended response questions.

Non-examined Assessment (NEA): 50% gualification: 100 marks Substantial design and make task

- Assessment criteria:
- Identifying and investigating design possibilities
- Producing a design brief and specification
- Generating design ideas
- Developing design ideas
- Realising design ideas
- Analysing & evaluating
- In the spirit of the iterative design process, the above should be awarded
- holistically where they take place and not in a linear manner
- Contextual challenges to be released annually by AQA on 1 June in the year prior to the submission of the NEA

Key stage 4 curriculum

- Students will produce a prototype and a portfolio of evidence
- Work will be marked by teachers and moderated by AQA

Our key stage 4 DT curriculum aims to ensure the following skills and knowledge are developed for them to achieve a GCSE DT

Our GCSE Design and Technology specification sets out the knowledge, understanding and skills required to undertake the iterative design process of exploring, creating and evaluating. The majority of the specification should be delivered through the practical application of this knowledge and understanding. Topics and themes have been grouped to help you teach the specification, but these are not intended as a route through the specification, you can teach the content in any order. The subject content has been split into three sections as follows:

Core technical principles

- new and emerging technologies
- energy generation and storage
- developments in new materials
- systems approach to designing
- mechanical devices
- materials and their working properties.
- Specialist technical principle
- selection of materials or components
- forces and stresses
- · ecological and social footprint
- sources and origins
- using and working with materials
- stock forms, types and sizes
- scales of production
- specialist techniques and processes
- surface treatments and finishes.

Designing and making principles

- investigation, primary and secondary data
- environmental, social and economic challenge
- the work of others
- design strategies
- communication of design ideas
- prototype development
- · selection of materials and components
- tolerances
- material management
- specialist tools and equipment
- specialist techniques and processes

Assessment Objective 1, Identify, investigate and outline design possibilities to address needs and wants.

Assessment Objective 2, Design and make prototypes that are fit for purpose.

Assessment Objective 3

Analyse and evaluate:

- design decisions and outcomes, including for prototypes
- made by themselves and others
- wider issues in design and technology.

Assessment Objective 4, Demonstrate and apply

- knowledge and understanding of:
- technical principles
- designing and making principles.



