The Arts, PE & Technology Faculty
Design Technology

Subject Intent:

At Saint Thomas More Academy, students receive a design and technology curriculum which allows them to exercise their creativity through designing and making. Students are taught to combine their designing and making skills with knowledge and understanding in order to design and make a product. Skills are taught progressively to ensure that all children are able to learn and practice in order to develop as they move through the school. Evaluation is an integral part of the design process and allows children to adapt and improve their product; this is a key skill which they need throughout their life. D&T allows students to apply the knowledge and skills learned in other subjects, particularly Maths, Science and Art. Students interests are captured through theme learning, ensuring that links are made in a cross curricular way, giving them motivation and meaning for their learning.

Course Overview:

GCSE: AQA Design Technology

The GCSE course is made up of 2 parts:

- **NEA -** A main focus of the course will centre on the 3 contextual challenges (Non exam assessment). Students will choose one based on teacher's advice, present a design proposal and produce a project brief specification. They will present their design decisions using a range of communication techniques including CAD and CAM. The final solution will be modelled to become a high quality artefact. The product will receive ongoing analysis and evaluation which is evident throughout the project that clearly influences the design brief and the design and manufacturing specifications. The NEA is worth 50% of the overall GCSE.
- **Exam** – Students will sit a 2 hour written exam in year 11. The exam syllabus consists of all technology related subjects including Resistant Materials, Graphics, Electronics and Textiles. The exam is worth 50% of the overall GCSE.

A Level: AQA Product Design

The A Level course is made up of 3 parts:

- **NEA -** A practical application of technical principles and designing and making principles through a substantial design and make task.
- The course is worth 100 marks and is 50% of the A Level
    - **Paper 1** – Technical Principles
        - 120 marks
        - 30% of A level
    - **Paper 1** – Technical Principles
        - 80 marks
        - 20% of A level

Course Detail:

A list the key content students will cover, broken down into these headings

Key stage 3:

All teaching of DT in KS3 follows the design, make and evaluate cycle. Each stage should be rooted in technical knowledge. The design process should be rooted in real life, relevant contexts to give meaning to learning. While making, students should be given choice and a range of tools to choose freely from. To evaluate, students should be able to evaluate their own products against design criteria. Each of these steps should be rooted in technical knowledge and vocabulary. DT should be taught to a high standard, where each of the stages should be given equal weight.

The key skills we teach students are:

- Food and nutrition
- Electrical and mechanical components
- Resistant Materials
- Graphic products

Design Technology is usually taught in 9 week rotations.

Key stage 4:

Design Technology - During the two-year course, students will explore the knowledge, understanding and skills required to then undertake the design process. They will undertake design and making tasks that explore the process of exploring, creating and evaluating. The majority of the specification will be delivered through the practical application of the knowledge and understanding acquired. The curriculum will build on previous knowledge from KS3. Students must demonstrate mathematical and scientific knowledge and understanding in relation to Design and Technology.

Key stage 5:

Product Design - During the two-year course, students will explore the knowledge, understanding and skills required to then undertake the design process. This qualification gives students the practical skills, theoretical knowledge and confidence to succeed in a number of careers, especially those in the creative industries.

They will investigate historical, social, cultural, environmental and economic influences on design and technology, whilst enjoying opportunities to put their learning in to practice by producing prototypes of their choice. Students will gain a real understanding of what it means to be a designer, alongside the knowledge and skills sought by higher education and employers.

Useful links

Useful links

Key stage 3: https://www.technologystudent.com/
Key stage 4: https://filestore.aqa.org.uk/resources/design-and-technology/specifications/AQA-8552-SP-2017.PDF

https://filestore.aqa.org.uk/resources/food/specifications/AQA-8585-SP-2016.PDF

Key stage 5: https://filestore.aqa.org.uk/resources/design-and-technology/specifications/AQA-7552-SP-2017.PDF