Salford City Academy
The best in everyone™
Part of United Learning

Subject: Design & Technology

Year 10

OVERVIEW

In the Technology faculty we develop students into independent problem solvers, by teaching the students how to independently produce bespoke products in response to a given design brief. In Year 10 students will further develop previous knowledge and gain a deeper understanding of all theory aspects of the course in preparation for the Non-Exam Assessment and external exam. Theory lessons will be delivered alongside small focused practical tasks to further embed knowledge.

Aut

Theory

- Natural and manufactured timber
- Ferrous and Non-Ferrous Metals
- Thermoforming and thermosetting polymers
- Papers and Board

Practical

- Timber planter (hand tools)
- Copper lamp (hand tools)
- Lamp shade (CAD)

Assessment:

Design – working drawing of the timber planter.

Make – timber frame and concrete planter.

Evaluate – how well the student has evaluated their designs, practice and finished product.

Knowledge – of properties of materials, workshop tools and machinery.

Spr

Theory

- Natural, synthetic, blended and mixed fibres.
- Market pull, technology push
- Product life cycle & Globalisation
- Advantages and disadvantages of CAD CAM
- Social, cultural, economic and environmental responsibilities in designing and making products.
- The importance of sustainability issues and environmental issues when designing and making

Practical

- Storage bag
- CAD CAM flat pack furniture

Assessment:

Design – design sketches and prototypes of storage bag.

Make – textiles hand stitching, cutting and seaming.

Evaluate – how well the student has evaluated their designs, practice and finished product.

Knowledge – of properties of materials and technological advancements.

Sum

Smart Materials

- Developments in modern and smart materials, composite materials and technical textiles

Electronic systems and programmable components

- How electronic systems provide functionality to products and processes

Mechanical components and devices

- The functions of mechanical devices, to produce different sorts of movement

Practical

- Circuit construction and testing.

NEA - Section A - Identifying and investigating design possibilities

Assessment:

Design – mechanical and electronical movement.

Make – range of programmable boards, from set tasks to solving a problem for inclusive design.

Evaluate – how well the student has evaluated their designs, practice and finished product.

Knowledge – smart materials, electronic and mechanical systems, their uses and how to include in design work.

Useful resources for supporting your child at home:

Excellent design sketching tutorials:

product designer maker - YouTube

Student access to Focus eLearning – direct link given to students - excellent Fusion 360 video tutorials

Homework:

Week 1 – exam questions – Ms Forms.

Week 2 – sketching techniques