3D Design

Learning Aims and Curriculum Intent:

This course is a new offer which is a mix of Art, and Design Technology. This course uses the Art marking criteria but with a heavy emphasis on 3D making in a workshop context. Pupils will, in Component 1 and Component 2, be required to work in one or more area(s) of three-dimensional design, such as architectural design, sculpture, product design, interior design, and 3D digital design. There is no technical theory examination to this course, however there is a requirement that the pupil annotates all their work and responds to a theme in exam conditions. Pupils may explore overlapping and combinations of areas, a key criterion for a successful pupil will be their ability to develop an artistic approach in the presentation of their portfolio pages and preparation for final exam. In addition, pupils making ability will be assessed, given the opportunity to learn and develop their skills throughout the course.

Pupils will learn and understand the way sources inspire the development of ideas relevant to three-dimensional design including, how sources relate to historical, contemporary, cultural, social, environmental, and creative contexts. Similarly, how ideas, feelings, forms, and purposes can generate responses that address specific needs be these personal or determined by external factors such as the requirements of an individual client's expectations.

Term	Content, Key Questions and Knowledge	Skills	Assessment
Michaelmas + Lent	Topic: 'Lamps and Lighting' inspired by biomimicry in Design Indicative content: Big Learning Objective: Develop your own personal and Meaningful Product in Response to the theme of 'Lamps and Lighting. Ensure that you: AO1: Develop ideas through investigations, demonstrating critical understanding of sources. AO2: Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes. AO3: Record ideas, observations, and insights relevant to intentions as work progresses. AO3: Record ideas, observations, and insights relevant to intentions as work progresses. AO4: Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language. Whilst this project will enable students to freely pursue an idea/ topic/ or concept of their choice, it is important to acknowledge that workshop lessons covering specific skills, processes and techniques will be explicitly taught. These include: Various approaches to technical drawing Concrete Moulding The use of CAD and laser cutting Wood lamination Working with acrylic Constructing an electronic circuit Threshold Question: How can I investigate a topic of 'Lamps & Lighting" using appropriate media, processes and techniques to: Develop Ideas Refine Ideas Refine Ideas Present Ideas Discipline: Product Design	Subject Specific Skills Task Analysis Sketchbook Presentation Observational Drawing Isometric projection Colour rendering Printing Techniques – Mono printing Paper Manipulation Card prototyping One and two point perspective Wood working skills Concrete pouring 2D Design CAD Software competency Electronics Laser cutting Brief Design and development of ideas Reflect on and learn from mistakes. Transferable Skills Collaboration Creativity Communication Oracy Literacy Self-Assessment Peer-Assessment	Holistic assessment of sketchbook. This method of assessment is in the final marking of GCSE coursework.

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Topic:

Street Furniture

Indicative content:

Big Learning Objective: Develop your own personal and Meaningful Project in Response to the theme of 'Street Furniture. Ensure that you:

AO1: Develop ideas through investigations, demonstrating critical understanding of sources. **AO2:** Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes. **AO3:** Record ideas, observations and insights relevant to intentions as work progresses.

AO4: Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

Whilst this project will enable students to freely pursue an idea/ topic/ or concept of their choice, it is important to acknowledge that workshop lessons covering specific skills, processes and techniques will be explicitly taught. These include:

Various approaches to technical drawing Iterative Design, Model Making, Architectural Design, the use of CAD and laser cutting, Designing and constructing to scale and Experimenting with different finishes on metals and woods

Threshold Question:

How can I investigate a topic 'Street Furniture' brief using appropriate media, processes and techniques to:

Develop Ideas Refine Ideas Record Ideas Present Ideas

Discipline:

Product Design: Architecture

Subject Specific Skills

Task Analysis Working to scale
Metal Manipulation
Plastic Dip Coating
3D CAD Software
Isometric Drawing Perspective drawing Dye Sublimation Spray painting Surface Finishes Model Making

Transferable Skills

Collaboration Creativity Communication Oracy Literacy Self-Assessment Peer-Assessment

Holistic assessment of sketchbook. This method of assessment is in the final marking of GCSE coursework.

Examples of Homework	 (1) Take a series of photographs of Biomimicry inspiration from several angles. (2) Present a Designer Research page in your sketchbook. Make sure to include: The designer's pieces that most inspire you The materials and techniques used in these works The context behind the designs (Social, Moral, Environmental) Which elements you could use in your own designs A 3D response to the designer's work 		
Key terminology	Task Analysis, Design Brief, Lamination, Manipulation, Material Properties, Former, Computer Aided Design, Critical thinking, Evaluative, Iterative, Experimental, Automation, Manufacturing, Biomimicry, Carving, Etching, Printing, Isometric, Orthographic, Miniature, Site Specific		
Super-curricular enrichment and scholarly extension	Due to the self-directed nature of KS4 content, students Super Curricular requirements will differ. As such, we will differentiate and propose different super curricular opportunities to students on a case basis. This will be evidenced in students tutorial logs/ digital sketchbooks and can be shown upon request. However, for Michaelmas 1, all students will be encouraged to Michaelmas: Read: "I use colour as a way of starting a conversation" says designer Yinka Ilori (dezeen.com) Watch: Abstract – The Art of Design (Netflix), Biomimicry in Architecture - YouTube Visit: The Saatchi Gallery, The Design Museum		
Useful websites	www.technologystudent.com, www.dezeen.com		
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