## Year 10 Curriculum Content: 3D Design

ASSESSMENT OBJECTIVES			
AOI	Develop ideas through investigations, showing critical understanding of artist's work.		
AO2	Selecting and experimenting with appropriate media, materials, techniques and processes.		
AO3	Record ideas, observations and insights relevant to intentions as work progresses.		

Present a personal and meaningful response that demonstrates understanding of visual language.

## **DESIGN MOVEMENTS: ART DECO**

Art Deco is an international decorative arts movement, most popular between the years 1924 - 1940. It is a style of drawing, that relies on bold designs, clear lines, vibrant colours and patterns. Geometric shapes and intense colour schemes are prominent. Art Deco's main characteristics are derived from the various painting styles of the early twentieth century, ranging from Cubism to Italian Futurism. Art Deco is usually associated to the architecture of the 1930s and speed and luxury. Recently it has seen a revival.

Art Deco had an extensive influence on architecture in the 1930s and 1940s. Many buildings on the coast of Florida have an Art Deco exterior, tending to be symmetrical with distinctive windows and colours.

Link: https://www.tate.org.uk/art/art-terms/a/art-deco



HAND TOOLS





## HOW DO 3D PRINTERS WORK?

The 3D Printer we have in school uses a process called Fused deposition modeling (FDM), also known as fused filament fabrication (FFF), which is the most widely used type of 3D printing at the consumer level. FDM 3D printers work by extruding thermoplastic filaments, such as ABS (Acrylonitrile Butadiene Styrene), PLA (Polylactic Acid), through a heated nozzle, melting the material and applying the plastic layer by layer to a build platform. Each layer is laid down one at a time until the part is complete.

FDM 3D printers are well-suited for basic proof-of-concept models, as well as quick and low-cost prototyping of simple parts, such as parts that might typically be machined.

KEY WORDS		ZAHA HADID
Three- Dimensional	Having or appearing to have length, breadth and depth.	Dame Zaha Mohammad Hadid (31 October 1950 – 31 March 2016) was a British-Iraqi architect, artist and designer, recognised as a major figure in architecture of the late 20th and early 21st centuries. Born in Baghdad, Iraq, Hadid studied mathematics as an undergraduate and then moved to London to study at the Architectural Association School of Architecture in
Vacuum	A space or container in which the air has been partially or fully removed.	1972. Known as an architect who consistently pushes the boundaries of architecture and urban design, her work experiments with new spatial concepts intensifying existing urban landscapes and encompassing all fields of design, from the urban scale to interiors and furniture.
Mitre	A joint made between two pieces of wood at an angle of 90 degrees, often with a 45 degree edge.	summer Olympics. It's undulating concrete roof features cut-outs that allow natural light to filter in across the pool's blue water. For its Bow and Rise chairs, Zaha Hadid Architects explored the natural growth processes that occurs in marine biology, specifically underwater ecosystems and coral formations. The two chairs are built from polylactic acid plastic – a biodegradable, non-toxic material made
Architect	A designer who designs buildings and supervises their construction.	from renewable resources like corn-starch, making it both lightweight and sturdy. Link: https://www.zaha-hadid.com/
High Impact Polystyrene (HIPS)	A versatile, cost- effective, impact- resistant material which is easy to vacuum form into shape.	