## Introduction of 3D Design:

The 3D Design A Level course enables students to explore a wide range of materials and processes to create 3-dimensional outcomes. After that, the final outcomes may be architectural, lighting, body adornment, sculpture, furniture, set design, product design and 3D design.

Models may be created automatically or manually. The manual modeling process of preparing geometric data for 3D computer graphics is similar to plastic arts such as sculpting.
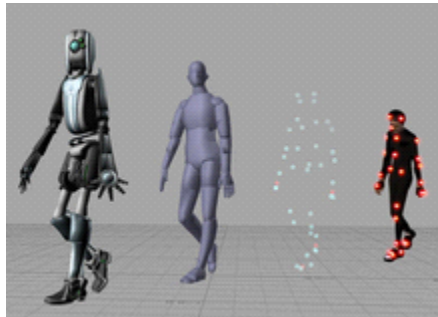


## Model:

Three-dimensional (3D) models represent a physical body using a collection of points in 3D space, connected by various geometric entities such as triangles, lines, curved surfaces, etc. Being a collection of data (points and other information), 3D models can be created manually, algorithmically (procedural modeling), or by scanning. Their surfaces may be further defined with texture mapping.
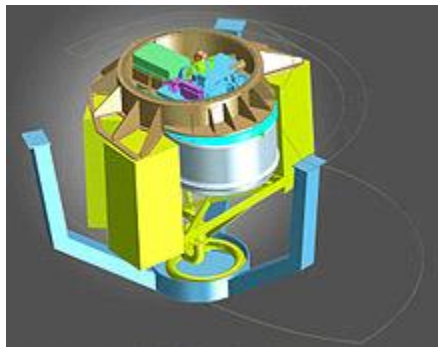


## Representation

Almost all 3D models can be divided into two categories.

Solid

Shell or boundary

**Process**

Polygonal modeling

Curve modeling

Digital sculpturing



**Uses:**

3D modeling is used in various industries like film, animation and gaming, interior design and architecture. They are also used in the medical industry to create interactive representations of anatomy. A wide number of 3D software are also used in constructing digital representation of mechanical models or parts before they are actually manufactured.

3D modeling is also used in the field of industrial design, wherein products are 3D modeled before representing them to the clients. In media and event industries, 3D modeling is used in stage and set design.