

Visualising Solid Shapes

Introduction to Solid Shapes

Visualising solid shapes

- Plane or two dimensional figures have only length and breadth and they lie in a single plane whereas three dimensional solids have length, breadth and height and they do not lie entirely on a plane.
- The flat surfaces that form the skin of solid are called its faces, the line segments that form the skeleton are called edges and the points where the edges meet are called vertices.
- All two dimensional figures can be identified as the faces of three dimensional solid shapes.
- The net of a three dimensional solid is a two dimensional skeleton outline, which when folded results in the three dimensional shape.
- Solid shapes can be drawn on a flat surface, which is known as the two dimensional representation of a three dimensional solid.
- Sketches of solid are two types; oblique and isometric.
- Oblique sketches are drawn on squared paper. They do not have exact lengths but still convey all the significant aspects of the appearance of a solid.
- Isometric sketches are drawn on dotted or isometric sheets and have the exact measurements of solids.
- Viewing the different section of Solids
- Three dimensional objects are solids have lengths, breadth and height and look different from various locations.
- Sections of a solid can be viewed in a number of ways.
- Visualizing a solid help to analyse or see the hidden parts of the solid.
- A solid can be viewed from different angles. Viewing a solid from the front, side and top are three most common ways of viewing the solid.
- Cutting or slicing a solid with result in its cross-section, which is also one way of viewing the section of a solid.
- Observing the two dimensional shadow of a three dimension solid is also a method of viewing a solid.
- Shadows of solids are of different sizes depending on the position of the solid and the position of the source of light.