

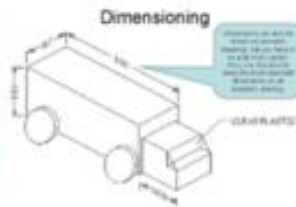
Knowledge Organiser

Unit R039—Communicating Design ideas

Project Brief

A national company produces a range of television (TV) appliances. As the design engineer, you have been tasked with designing the remote control unit that will support new TV equipment. Your design will be packaged with the TV and be available to be purchased online and in electrical goods retailers.

- The remote control should:
- consist of a moulded construction
- be comfortable to hold
- be sized to suit the 5th to the 95th percentile range
- include buttons to press
- include numbers 1 through to 0, play, fast forward, rewind, pause and stop as a minimum
- allow users to easily identify its functions
- be aesthetically pleasing
- be powered by two single AA batteries
- have a maximum size no greater than 220 mm × 80 mm × 30 mm.



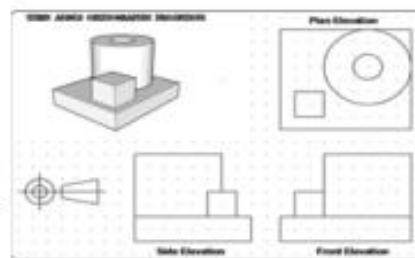
Topic Area 1

Freehand drawing techniques. Production of 2D and 3D designs drawn by hand. Use the isometric grids to help keep the design ideas following an ISOMETRIC convention. Use of colour rendering along with full use of notes and annotation (include key features, functions, dimensions, materials etc)

Topic Area 2

Produce a 3rd angle Orthographic projection drawing.

Orthographic Projections are formal drawings that are drawn in 2D. They generally show three faces; the front view, the side view and the top view. These have to be in specific places. These should be drawn neatly and dimensions added in a specific way (normally below and to the left).



Topic Area 3

Use of Computer Aided Design—CAD

Computer Aided Design allows for fast, accurate production of design ideas. There are many different packages such as Auto-desk, ProDesktop, Solid works that are used to produce high quality designs. Your final designs will be produced using CAD and must show orthographic projection and full rendered

Exploded and Assembly drawings allow you to show how your design would be manufactured and assembled. It allows you to show DFMA (design for Manufacture Assembly) as well as DFM (Design for Maintenance)

