

MOBILE PHONE HOLDER PROJECT



STEP 1

DESIGN THE PHONE HOLDER SHAPE (CAD)

The students have the opportunity to design from scratch a personalised mobile phone holder. They should first decide if the phone holder is to be used for a particular phone or a general design for many different types of phones and hence design it appropriately. The design process can be carried out in either 2D or 3D CAD software.



Figure 1: 3D CAD Design

Target Age Group

Key Stage 3

Skills Learned

CAD, CAM, Design, Laser Cutting and Line Bending

Outline of Project

In this project, the students design and manufacture a functional mobile phone holder. Each student has the freedom to design a completely unique holder of their own design using CAD technology.

The design is then laser cut and folded into the desired shape for the completed phone holder.

Materials to be provided to the Students

1 piece of 3mm acrylic (large enough for the template of the phone holder.)*

Equipment Requirements

Laser Cutter **

Hot Wire Strip Heaters***

* We recommend a thickness of 3mm acrylic because this provides enough rigidity for the holder but still allows the acrylic to be folded on a single wire

** We have used a Laser Cutter throughout this project. Depending upon availability, a Router or Milling machine could be used equally well

*** Any hot wire line bender will be suitable for this project

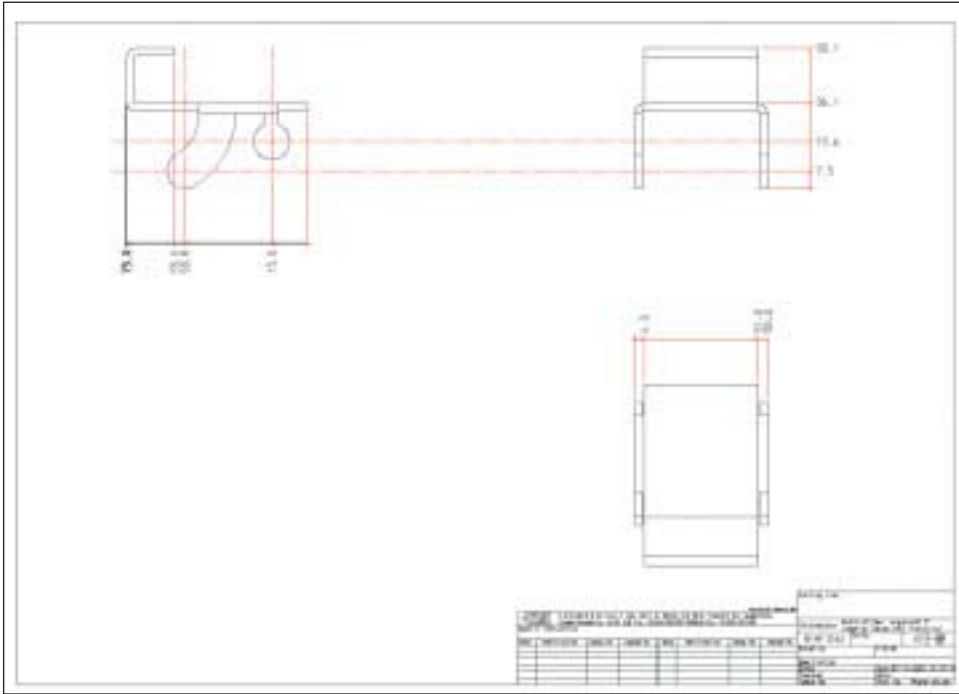


Figure 2: 2D CAD Design

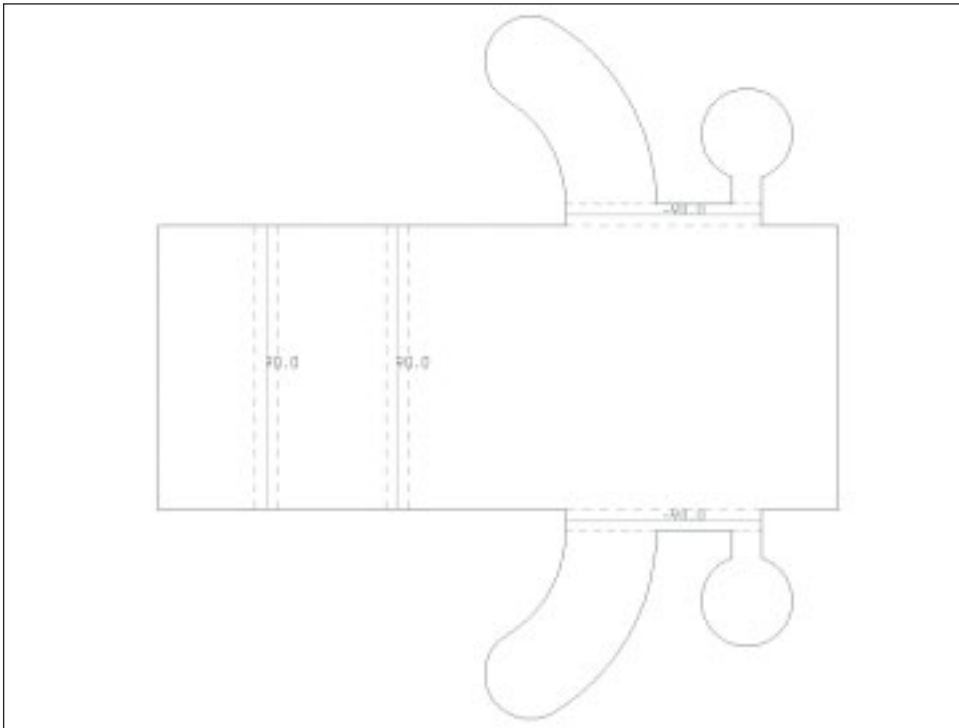


Figure 3: Template Layout

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STEP 2

LASER CUTTING

Place the material in the laser and cut out the template at the required speed and power.



STEP 3

LINE BENDING

Fold the phone holder in the required locations and in the correct order

