

# GCC LASER PRO X252

The new Laser cutter has had a huge impact across all year groups. It not only increases productivity, it also allows students to become involved in all stages of the manufacturing process, allowing them to achieve high quality outcomes in a range of materials.



## Year 7

Increases productivity, allows the students to become involved in laser cutting their own packaging, by observing/ operating machines under supervision



## Year 8

RM- Revised trinket box project, students use the laser cutter to engrave their own designs.

Graphics- Students create professional graphics for menus, using the laser cutter to create paper mechanics elements.



## Year 9

RM- Students use CAD/CAM to product moulds for pewter casting.

Graphics- Students create intricately designed diffusers, cut on the laser cutter for eco-friendly

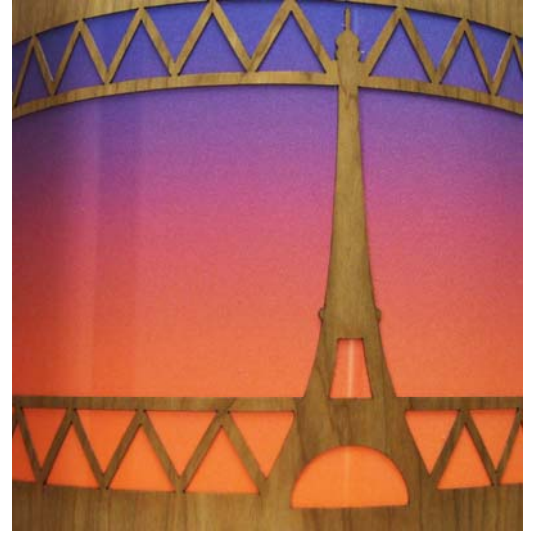
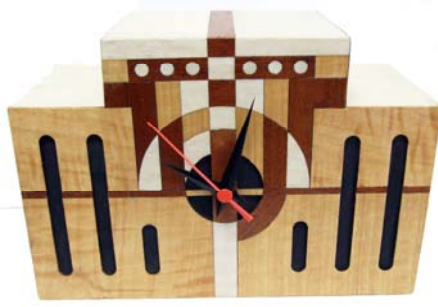


## Year 10

Students experiment with a range of materials including acrylic, ply and mdf. Products can now be cut in a whole range of thicknesses and students achieve very professional looking outcomes.

## Year 11 & 12

Students are now able to produce complex products with accuracy using CAD/CAM in a whole range of materials. The new machine produces a clean cut with less carbon (black edges)



## Year 12 & 13

Students are now able to produce templates with accuracy using CAD/CAM this allows them to use other workshop processes (for example routing) to manufacture products from thicker materials for furniture/ toys etc

Tools/equipment and materials used

### Diary of manufacture

I used the laser cutter to cut out the 9mm thick 100% maple template (to use as a jig) as it could create the intricate feather design. It needed to be 9mm thick so that the bearing on the flush cutter didn't slip off.

I placed strips of double sided sticky tape on one side of the template (it is symmetrical it didn't matter which) and placed in the corner of the 20mm thick piece of natural wood.

Next, using the band saw (while wearing protective earmuffs, goggles and an apron), I cut around the outside of the template, leaving about 10-20mm to make sure there's enough to smooth down to the correct shape.

So that I can use the router to smooth down the inside of the frame I used a 22mm drill bit fixed in the pillar drill to drill a hole near the inside edge of the template. This is so I can insert the flush cutter easily into the inside and smooth out the circle for the mirror to be viewed in.

Next, while wearing protective earmuffs, goggles and an apron and with the frame clamped, I used the router with a flush cutter attached to smooth out the inside and outside.

This is what the edges of the frame looked like after using the router for the outside. You can see that it hasn't reached all the way into the grooves but the sides are very

While the frame was clamped (and the template was still attached) I used coarse

After I had removed the template (using a craft knife) I applied the first layers of

