



St Benedict's Catholic School

The Catholic Secondary School for West Suffolk

DT CURRICULUM GUIDE

Year 10

Product Design

In the first full design and make project pupils have to design, model and manufacture a free standing egg holder. Plastics including polystyrene and acrylic will be the main material focus. Theory work will include an investigation into oil production and related sustainability issues. Design requirements and physical properties such as;

- Balance
- Symmetry
- Stability
- Rigidity

are considered before pupil's model their first ideas using card and foam board. The final egg holder will be manufactured using a combination of CAD/CAM equipment and workshop machinery. Batch production methods with the use of jigs, moulds and templates are encouraged and there is a greater emphasis placed on dimensional accuracy. At the same time In order for the pupils to show the progression of their egg holder ideas they have to generate an A3 design page which explains methods used, problems they overcame and key decisions. Once the product has been completed suitable testing and evaluation techniques will be applied.

In the second design and make tasks pupils have to model and then make a house hold door number using pewter (casting) which is then mounted onto a wooden back board.

Pupils will select a suitable font and use CAD/CAM techniques to produce a mould for casting. Once the mould is made it will be used to create the final number shape and pupils will go on to use appropriate filing and polishing techniques to make a final product of a high quality.

As well as the different design and make skills associated with this product pupils will also investigate material properties and batch production - the use of jigs, moulds and templates in order to make repeated identical parts.