

Year 11 into 12 bridging work – D&T

AQA Design and Technology

Year 11 into A Level - Bridging information and requirements over the summer.

Before you arrive to A level D&T in September, you need to complete the following tasks...

- 1) Print off the specification (7552) and familiarise yourself with the topics and content you will need to know by the end of this course. (Pages 9-46) You will find the spec on the link below.

<https://www.aqa.org.uk/subjects/design-and-technology/as-and-a-level/design-and-technology-product-design-7552>

- 2) Buy a folder and some dividers (pack of ten)
- 3) Buy the course book that you will need to study from for this A Level.



Authors: Will Potts, Julia Morrison, Ian Granger, Dave Sumpner
Publisher: Hodder
ISBN-13: [9781510414082](https://www.isbn-international.org/product/9781510414082)

Present the work below on A3 paper with your name clearly on each page, ready to hand in the first lesson in year 12.

Compulsory Task 1

To build your knowledge of production processes you need to research the following and give advantages and disadvantages of each:

1. Injection moulding
2. Die casting aluminium
3. Just in time manufacturing
4. Lean manufacturing

You might want to present this work as a table, or as 4 separate sheets of research. Include example products and where each type of manufacturing might be used in industry.

Compulsory Task 2

Research and produce a write up, with a step by step of processes for each of the following different forming methods, name specific products and scales of production (one off, batch, mass etc)

- vacuum forming
- thermoforming
- calendaring
- line bending
- laminating (layup)
- injection moulding
- blow moulding
- rotational moulding
- extrusion

Compulsory Task 3

Develop your knowledge of designing and developing your designs you need to research what and 'iterative' approach to designing means.

Then you need to:

1. Design 2 solutions for a hand held product to pick up plastic bottles from the floor
2. Pick your best idea and provide 2 developed iterations of your product. (you could add photographs of models if you want to model at home, or use CAD to develop ideas)

For each of the above you need to annotate your designs for materials, components and ergonomics.

State how ergonomics and anthropometrics are considered in your design work.