

Curriculum Detail 2018-2019

Subject

Design Technology

Topics covered at Key Stage 3:

Students are on a rotation of the following Design Technology disciplines over 2 years:

- Computer Aided Design
- Graphics
- Food studies
- Steady Hand Game
- Crafty Robot
- Maze Game

Topics covered at Key Stage 4:

Edexcel GCSE in Design and Technology

<https://qualifications.pearson.com/en/qualifications/edexcel-gcses/design-and-technology-2017.html>

Component 1 - Written examination: 1 hour and 45 minutes

50% of the qualification

100 marks

Content overview

1 – Core content and any one from the following material categories:

2 – Metals

3 – Papers and boards

4 – Polymers

5 – Systems

6 – Textiles

7 – Timbers

Component 2 - Non-examined assessment

50% of the qualification

100 marks

Content overview

There are four parts to the assessment:

1 – Investigate

This includes investigation of needs and research, and a product specification

2 – Design

This includes producing different design ideas, review of initial ideas, development of design ideas into a chosen design, communication of design ideas and review of the chosen design

3 – Make

This includes manufacture, and quality and accuracy

4 – Evaluate

This includes testing and evaluation.

Topics covered at Key Stage 5:

<https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/design-technology-product-design-2017.html>

A Level Product Design

Component 1: Principles of Design and Technology (Paper code: 9DT0/01)*

Written examination: 2 hours 30 minutes
50% of the qualification
120 marks

Content overview

Topic 1: Materials
Topic 2: Performance characteristics of materials
Topic 3: Processes and techniques
Topic 4: Digital technologies
Topic 5: Factors influencing the development of products
Topic 6: Effects of technological developments
Topic 7: Potential hazards and risk assessment
Topic 8: Features of manufacturing industries
Topic 9: Designing for maintenance and the cleaner environment
Topic 10: Current legislation
Topic 11: Information handling, Modelling and forward planning
Topic 12: Further processes and techniques.

Component 2: Independent Design and Make Project (Paper code: 9DT0/02)

Non-examined assessment
50% of the qualification
120 marks

Content overview

- Students individually and/or in consultation with a client/end user identify a problem and design context.
- Students will develop a range of potential solutions which include the use of computer aided design and evidence of modelling.
- Students will be expected to make decisions about the designing and development of the prototype in conjunction with the opinions of the client/end user.
- Students will realise one potential solution through practical making activities with evidence of project management and plan for production.
- Students will incorporate issues related to sustainability and the impact their prototype may have on the environment
- Students are expected to analyse and evaluate design decisions and outcomes for prototypes/products made by themselves and others
- Students are expected to analyse and evaluate of wider issues in design technology, including social, moral, ethical and environmental impacts.

Assessment overview

- The investigation report is internally assessed and externally moderated.
- Students will produce a substantial design, make and evaluate project which consists of a portfolio and a prototype

- The portfolio will contain approximately 40 sides of A3 paper (or electronic equivalent)