



Subject Design Technology

Topics covered at Key Stage 3 – Students in Years 7 and 8 rotate through 6 different key areas of Design Technology. One key area is studied each term so that by the end of Year 8, every student has experienced all 6 topics.

Year 7/8

Food Studies:

- Health, safety and hygiene in the kitchen
- Nutrition and healthy eating
- Where food comes from and seasonality
- Practical skills

Steady hand game:

- Designing of wire component
- Electronic components
- Soldering skills
- Assembling parts into final outcome

Graphics:

- Use of drawing equipment
- Different drawing techniques
- Shading
- Drawing different products

Computer Aided Design:

- Techsoft 2D Design skills
- Tinkercad skills
- 2D & 3D tools
- Scale and orientation

Maze Game:

- Designing and developing maze game design
- Vacuum forming
- Filing and polishing acrylic
- Evaluating practical outcome

Fizzbit Robot:

- 2D nets into 3D models
- Designing and developing robot net
- Manufacture of Robot casing
- Evaluating Robot outcome

Topics covered at Key Stage 4 (Years 9, 10 and 11)

AQA GCSE Food Preparation and Nutrition

Culinary techniques, as well as knowledge of nutrition, food traditions and kitchen safety.

- Food, nutrition and health
- Food science
- Food safety
- Food choice
- Food provenance.

GCSE Food Preparation and Nutrition specification equips students with an array of culinary techniques, as well as knowledge of nutrition, food traditions and kitchen safety. It will inspire and motivate students, opening their eyes to a world of career opportunities and giving them the confidence to cook with ingredients from across the globe.

Assessment objectives

The exam (50% of overall grade) and non-exam assessment will measure how students have achieved the following assessment objectives.

- 1: Demonstrate knowledge and understanding of nutrition, food, cooking and preparation.
- 2: Apply knowledge and understanding of nutrition, food, cooking and preparation.
- 3: Plan, prepare, cook and present dishes, combining appropriate techniques.
- 4: Analyse and evaluate different aspects of nutrition, food, cooking and preparation including food made by themselves and others.

Non-Exam Assessment:

Task 1 Food investigation (30 marks). This is a set task where students need to:

- Research
- Investigate
- Analyse and evaluate

Task 2 Food preparation assessment (70 marks). This is another set task where students need to:

- Research
- Demonstrate technical skills
- Plan the final menu
- Make final dishes
- Analyse and evaluate

The written GCSE exam (1 hour 45 minutes) includes questions that allow students to demonstrate their ability to:

- Recall subject content
- Draw together information from different areas of the specification
- Apply their knowledge and understanding in practical and theoretical contexts

Edexcel GCSE Design Technology

The Pearson Edexcel GCSE (9–1) in Design and Technology consists of one externally-examined paper and one non-examined assessment component.

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.

Assessment overview

- Students will undertake a project based on a contextual challenge released by us a year before certification.
- This will be released on 1st June and will be available on the Edexcel website.
- The project will test students' skills in investigating, designing, making and evaluating a prototype of a product.
- Task will be internally assessed and externally moderated.
- The marks are awarded for each part as follows.

- 1 – Investigate (16 marks)
- 2 – Design (42 marks)
- 3 – Make (36 marks)
- 4 – Evaluate (6 marks)

Written examination: 1 hour and 45 minutes 50% of the qualification 100 marks

Assessment overview

The paper consists of two sections. Section A is assessed on the core content and Section B is assessed on the material category students have chosen.

Section A: Core

This section is 40 marks and contains a mixture of different question styles, including open-response, graphical, calculation and extended-open-response questions. There will be 10 marks of calculation questions in Section A.

Section B: Material categories

This section is 60 marks and contains a mixture of different question styles, including open-response, graphical, calculation and extended-open-response questions. There will be 5 marks of calculation questions in Section B.

Edexcel BTEC Construction Level 1

Students will cover 5 units

Y9 - Joinery Health and Safety, Welfare in Construction

Y10 - Construction drawing skills, Plumbing skills

Y11 – Carpentry

Topics covered at Key Stage 5 (Years 12 and 13)

Edexcel GCE Design Technology Product Design

The Pearson Edexcel Level 3 Advanced GCE in Design and Technology (Product Design) consists of one externally-examined paper and one non-examined assessment component.

Non-examined assessment 50% of the qualification 100 marks Content overview There are four parts to the assessment:

- 1 - Identifying and outlining possibilities for design: Identification and investigation of a design possibility, investigation of client/end user needs, wants and values, research and production of a specification.
- 2 - Designing a prototype: Design ideas, development of design idea, final design solution, review of development and final design and communication of design ideas.
- 3 - Making a final prototype: Design, manufacture and realisation of a final prototype, including tools and equipment and quality and accuracy.
- 4 - Evaluating own design and prototype: Testing and evaluation.

Assessment overview

- 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)
- The portfolio and prototype will be internally assessed and externally moderated.
- The marks are awarded for each part as follows.

- 1 – Identifying and outlining possibilities for design (33 marks)
- 2 – Designing a prototype (45 marks)
- 3 – Making a final prototype (30 marks)
- 4 – Evaluating own design and prototype (12 marks)

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

Assessment overview

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.