

## Art, Design & Technology: Design and Technology

| Subject:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
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| <p>Design and technology is a practical and valuable subject. It enables children and young people to actively contribute to the creativity, culture, wealth and well-being of themselves, their community and their nation. It teaches how to take risks and so become more resourceful, innovative, enterprising and capable.</p> <p>Students develop a critical understanding of the impact of design and technology on daily life and the wider world. Additionally, it provides excellent opportunities for students to develop and apply value judgements of an aesthetic, economic, moral, social, and technical nature both in their own designing and when evaluating the work of others.</p> |                                                                                                                                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
| Team members and specialism:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
| <p>Mr M Barker - Head of Curriculum Area - KS3/4/5 Product design<br/>           Ms K Brookes - Lead teacher - KS3 Food / KS4 Hospitality and Catering / KS5 Product Design<br/>           Miss Monaghan - KS3 Textiles<br/>           Miss A Piggott - KS3 Graphics / KS4/5 Product Design<br/>           Miss S Perry - Curriculum area TA<br/>           Mr I Cross - D&amp;T Technician<br/>           Mrs K Kinsella - D&amp;T Technician</p>                                                                                                                                                                                                                                                     |                                                                                                                                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
| Facilities -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
| <p>M6 - Food room<br/>           M7 - Textiles room<br/>           M8 - ICT room - ICT packages including 2D design and Sketch-Up for Computer Aided Designing.<br/>           M9 - Resistant Materials / Product design room (Workshop benches and classroom tables / brazing hearths / dip-coating equipment / Full range of workshop tools encl. drilling, cutting, shaping and sanding tools)<br/>           M10 - Resistant Materials / Product design room (Workshop benches and classroom tables / Laser cutter / Class set of laptops / 3D printer / Full range of workshop tools encl. drilling, cutting, shaping and sanding tools)</p>                                                      |                                                                                                                                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
| Curriculum Summary - (KS3, KS4 and KS5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
| <p><b>KS 3 - Two hours per week. 3 rotations</b></p> <p>In year 7, 8 and 9 students will have an introduction to a variety of materials, areas and projects within a carousel of between 9 and 13 weeks depending on the year group.</p> <p><b>Years 7 and 8:</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Rotation 1<br>Product Design                                                                                                                       | Rotation 2<br>Textiles                                                                                                                                                                                                                            | Rotation 3<br>Food & Nutrition                                                                                                                                      |
| Year 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Light project - A project designed to introduce students to a range of skills including CAD/CAM, Vacuum forming, Graphics and basic electronics    | Basic Skills - An introduction to basic skills and various fabric construction methods.                                                                                                                                                           | Basic Skills- An introduction to food hygiene and basic skills including knife skills and use of appliances.                                                        |
| Year 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Clock project. Designing and manufacturing a clock in the style of a modern designer or artist. Use of hand tools/workshop machinery/Laser cutter. | Pugglies - The project is designed to introduce new skills and develop existing ones whilst working to a specific theme and brief. Students will learn about smart materials and how to follow a specification whilst generating their own ideas. | Staple Foods - An introduction to staple foods and food provenance whilst building on practical skills in the kitchen through the preparation of a range of dishes. |

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| <b>Year 9:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                             |
| <b>Rotation 1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Rotation 2</b>                                                                                                                                                                                                                                                                | <b>Rotation 3</b>                                                                                                                                                                                                                                                                                                                                                                                     | <b>Rotation 4</b>                                                                                                                                                           |
| <b>Product Design 1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Textiles</b>                                                                                                                                                                                                                                                                  | <b>Food</b>                                                                                                                                                                                                                                                                                                                                                                                           | <b>Product Design 2</b>                                                                                                                                                     |
| Passive amplifier- A project designed to further develop practical skills whilst introducing the key aspects of the design process including presentation of ideas and iterative design.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Camouflage - This project will build on existing skills and processes along with developing new ones. Students will produce a personal response through the development of ideas based on a specific theme and be encouraged to further their independent research and learning. | Specialist Diets - A topic aimed at introducing a range of specialist diets, the reasons why people may follow a specialist diet and how to prepare a range of suitable dishes.                                                                                                                                                                                                                       | Metal work - A project designed to introduce students to another resistant material whilst further embedding the key aspects of the design process in preparation for GCSE. |
| <p><b>KS4 - 3 hours per week.</b></p> <p>AQA GCSE Product Design</p> <p>GCSE Product Design encourages you to design and make products with creativity and originality in a variety of practical activities, using a range of materials and techniques. Packaging, labelling and instructions are also encouraged as part of the complete design proposal, while marketing tools, such as advertising and points of sale, can be used to supplement the making experience and help create products which can be evaluated for their commercial viability.</p> <p>The student's coursework will be marked against the following criteria -</p> <p>Investigating the design context. 8 marks<br/>         Developing a design proposal. 32 marks.<br/>         Making. 32 Marks<br/>         Testing and Evaluation. 12 marks<br/>         Communication. 6 marks.</p>                                                                                    |                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                             |
| <b>Coursework - Due in March 2018</b><br><b>60% of the GCSE mark</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                  | <b>Exam - June 2018</b><br><b>40% of the GCSE mark</b>                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                             |
| <p>Following the design process to produce a final product based on the following starting context and design task - .</p> <p><b>Context - Designer influences</b><br/>         The work of a specific artist/designer or Art/design movement could be the source of ideas for a new range of products aimed at a design-conscious consumer market. When completing the task you should ensure that the designs developed into prototypes are not copies of existing work but reflect the general style of the chosen source and might be viewed as "in the style of pop art".</p> <p><b>Design task 3</b><br/>         A mail order company wishes to offer a range of products based upon 20<sup>th</sup> century design movements. You are required to choose one such movement and to design a make a product or range of products which reflect the essential features of the movement. You will need to investigate a specific target market.</p> |                                                                                                                                                                                                                                                                                  | <p>Written paper - Design development and theory.</p> <p>One exam for all students (2 hour paper) will contain a design question as well as testing students' knowledge and understanding of Product Design.</p> <p>The design question will be related to a themed content which the student will see after March 1st 2018.</p> <p>Example - For exams in June 2017 the theme was 'Nursery toys'</p> |                                                                                                                                                                             |

**The course involves -**

- Investigating and understanding a problem or need.
- Developing and communicating design ideas.
- Planning and organising the making of a product.
- Safely making the product from an appropriate material (this may be wood, metal, plastic, etc.).
- Testing, modifying and evaluating the design
- Knowledge and Understanding of specific material area

**KS5 - 5 hours per week.**

**A2 Product Design for students being examined in June 2018 -**

A2 Product Design carries on from AS taken in year 12. It encourages student to continue developing their creative designing and making skills. The solutions to issues that they hope to solve become a lot more real and personal as they initiate design solutions, develop, test and trial working models and prototypes.

Students need to be able continue to be able to sustain their imagination, innovation and flair when working with concepts and materials.

Inside and outside of lessons they should be continuing to develop an understanding of contemporary design and technological practices and consider the uses and effects of new technologies and modern materials.

As a curriculum this course is fantastic for developing student's thinking skills, financial capability, enterprise and entrepreneurial skills.

**AS Product design, Y12. 50% of full A level award. Completed in June 2017.**

**A2 Product design, Y13. 50% of full A level award. Completed in June 2018.**

**Coursework - Due in March 2018  
60% of the A2 mark**

F523 - Design, Make and Evaluate.

Major coursework project - Candidates are required to produce a portfolio and product that fully demonstrates their designing, making and evaluation skills using creativity, flair and innovation and that can be assessed against the assessment criteria. The coursework consists of designing, making, and evaluating a product, a marketing presentation, and a review and reflection. This unit is intended to draw upon and develop skills learnt in other units.

**Exam - June 2018  
40% of the A2 mark**

F524 - Product Design

This is a written paper that consists of two components. Candidates will be able to select questions across the focus material areas.

- Component One consists of eight questions, and each question follows a common format. Marking - 24 of the 36 marks are drawn from the core content and relate to the material focus; 12 marks are allocated to the specific material content from each of the focus areas. Candidates answer one question.
- Component Two assesses the abilities of candidates to make immediate design thinking responses to a given situation. It is intended to be a discriminator in identifying those candidates who can effectively use their experiences and knowledge in designing and making.

**Links to useful sites -**

**GCSE Product Design - Exam board page for student being examined in June 2018:**

[www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-product-design-4555](http://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-product-design-4555)

**Level 1 / 2 Hospitality and Catering - Exam board page for student being examined in June 2019:**

[www.educas.co.uk/qualifications/hospitality-and-catering](http://www.educas.co.uk/qualifications/hospitality-and-catering)

**A2 Product Design - Exam board page for student being examined in June 2018:**

[www.ocr.org.uk/qualifications/as-a-level-gce-design-and-technology-product-design-h053-h453/](http://www.ocr.org.uk/qualifications/as-a-level-gce-design-and-technology-product-design-h053-h453/)