



Eastbrook School

KS3 Curriculum Summary – Design & Technology

The information below gives an overview of the topics that your child will be studying in DT during years 7, 8 and 9. It also outlines how you can support your child to enrich and extend their learning outside of school.

| Year 7 (students are taught in a carousel model) | | |
|--|--|---|
| Autumn term | Spring term | Summer term |
| Topics and themes | Topics and themes | Topics and themes |
| Steady hand game: Health & safety Hardwoods & softwoods Manufactured boards Electronic circuits Soldering Calculating waste | Float a boat: Health & safety Vacuum forming Thermoplastics and thermosetting plastics Sewing | Hygiene and safety Equipment names and uses Weighing and measuring Modifying recipes Healthy eating Introduction to nutrition Sensory analysis |
| Useful websites | Useful websites | Useful websites |
| https://www.bbc.co.uk/bitesize/topics/zfgjimp3/resources/1 http://www.technologystudent.com/elec1/elececx.htm | https://www.bbc.co.uk/bitesize/clips/z869wmn https://www.bbc.co.uk/bitesize/topics/zxs4d2p/resources/1 | https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/ http://www.jamieoliver.com/ https://www.bbc.co.uk/bitesize/topics/zrdtsbk/resources/1 |
| Other ways to support learning | Other ways to support learning | Other ways to support learning |
| Visit: The Science Museum The Design Museum Read/Watch: Inside the Factory (BBC) The Gadget Show (Channel 5) | Visit: The Science Museum The Design Museum Read/Watch: Inside the Factory (BBC) The great British sewing bee (BBC) | Visit: Historical markets such as Borough Market and Spitalfields Markets Read/Watch: Step Up to the Plate (CBBC) Master Chef BBC Great British bake off Junior bake off |

Year 7 Achievement Summary – By the end of Year 7 students will:

- Be able to write a simple design specification with some justification.
- Be able to draw isometric cubes and to render them effectively.
- Understand how electrical and electronic systems can be powered and used in their products.
- Understand how to do basic calculations of the waste produced
- Understand the principles of nutrition and health.
- Understand the importance of eating healthily.
- Be able to accurately weigh and measure ingredients.
- Be able to understand hygiene and safety rules and know how to work safely within a food room.
- Understand how to carry out sensory analysis.

The year 8 and 9 curriculum has been adapted to account for lost learning time due to Covid 19. The principles agreed with Curriculum leaders and applied to these adaptations are depth over breadth and maximising student engagement

| Year 8 | | |
|---|---|---|
| Autumn term | Spring term | Summer term |
| Topics and themes | Topics and themes | Topics and themes |
| Hand held game project Health & safety Temporary fixings Alloys Sustainability The 6 Rs | Mechanical toy project Health & safety Mechanisms <ul style="list-style-type: none"> • Types of motion • Levers & linkages • Mechanical advantage • Cams & followers | Food safety Eatwell guide Food labelling and packaging Environmental considerations Understanding diets Modifying diets Understanding why we cook and how foods change when cooked Food processing and modification |
| Useful websites | Useful websites | Useful websites |
| http://www.technologystudent.com/energy1/engex.htm https://www.bbc.co.uk/programmes/topics/Sustainability https://www.bbc.co.uk/bitesize/clips/z3dygk7 | http://www.cabaret.co.uk/ http://www.flying-pig.co.uk/ http://www.technologystudent.com/cams/camdex.htm | https://www.bbc.co.uk/food/diets/healthy http://www.jamieoliver.com/ https://www.bbc.co.uk/bitesize/topics/zrdsbk/resources/1 |
| Other ways to support learning | Other ways to support learning | Other ways to support learning |
| Visit: The British Museum The Design Museum The Science Museum Read/Watch: Money for nothing BBC Documentaries on sustainable design/sustainability Inside the factory | Visit: The British Museum The Design Museum The Science Museum Read/Watch: YouTube clips on automata | Visit: The Science Museum Encourage students to take an interest in nutritional advice and packaging when shopping. Read/Watch: Step Up to the Plate CBBC Master Chef BBC |

Year 8 Achievement Summary – By the end of Year 8 students will:

- Understand how mechanical systems used in their products enable changes in movement and force.
- Be able to take into account the impact of decisions regarding design and making on society and the environment.
- Understand that designing is an iterative process and be open to advice and able to respond to feedback in a positive way.
- Be able to draw basic isometric shapes and to render them effectively.
- Understand the Eatwell guide and be able to justify the need to follow it.
- Be able to explain the importance of quality control.
- Understand how to reduce the growth of bacteria.
- Understand the stages of food processing and the positive and negative effects of food modification, including GM foods.
- Understand the key features of food labelling.

| Year 9 | | |
|--|--|--|
| Autumn term | Spring term | Summer term |
| Topics and themes | Topics and themes | Topics and themes |
| Desk Organiser Project Scales of production Jigs and fixtures Ferrous and non-ferrous metals Line bending | Graphics and Packaging Project Isometric projection Perspective drawing Orthographic views CAD/CAM Paper and boards Categorisation of fibres | Hazard Analysis Critical Control Point (HACCP) Food Poverty Food Provenance Function of ingredients Factors affecting food choices |
| Useful websites | Useful websites | Useful websites |
| http://www.bbc.co.uk/schools/gcsebitesize/ https://www.technologystudent.com/joints/scalep1.htm | http://www.design-technology.info/home.htm http://designmuseum.org/ http://www.bbc.co.uk/schools/gcsebitesize/ http://www.incpen.org/education/edframe.htm https://design-technology.org/packagingindex.htm https://www.bbc.co.uk/bitesize/topics/zcwhfg8/resources/1 | http://www.dtonline.org/ https://www.nutrition.org.uk/ |
| Other ways to support learning | Other ways to support learning | Other ways to support learning |
| Visit: The British Museum The Design Museum The Science Museum Read/Watch: Money for nothing BBC Inside the factory | Visit: The British Museum The Design Museum Museum of Brands Read/Watch: | Visit: The Science Museum Encourage students to take an interest in nutritional advice and packaging when shopping. Read/Watch: Step Up to the Plate CBBC Master Chef BBC |

Year 9 Achievement Summary – By the end of Year 9 students will:

- Understand how to calculate the amount of waste that will be produced when making products.
- Be able to use research to understand users' needs and to develop specifications inform designs.
- Be able to identify and solve their own design problems and understand how to reformulate problems given to them.
- Be able to select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture.
- Understand different scales of manufacture and the advantages and disadvantages of each.
- Be able to understand the importance of following HACCP.
- Become competent in a range of cooking techniques (for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes).
- Be able to cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet.

Achieving or exceeding the above constitutes Key Stage 4 readiness



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KS 4 Curriculum Summary – Design & Technology

The information below gives an overview of the topics that your child will be studying in Design and Technology during years 10 and 11. It also outlines how you can support your child to enrich and extend their learning outside of school.

At the end of Year 11 the students will sit – **Edexcel GCSE Design and Technology Specification code 1DT0**

The year 11 curriculum has been adapted to account for lost learning time due to Covid 19. These adaptations are a response to the amended syllabus. The students started the GCSE in year 9.

| Year 10 Edexcel GCSE Design & Technology | | |
|--|--|--|
| Autumn term | Spring term | Summer term |
| <p>Topics and themes</p> <p>Lighting Project Electronic systems Timbers and sustainability Design strategies Functional maths Ferrous and non-ferrous</p> <p>Packaging project Papers and boards Thermoforming and thermosetting polymers Textiles Impact of emerging technologies</p> | <p>Topics and themes</p> <p>Mechanical Aid Project CAD CAM Mechanisms Laser cutting CNC machining</p> <p>Practice Non-Examined Assessment (previously called coursework) Factors that influence the process of design and making The work of professionals and companies to inform design</p> | <p>Topics and themes</p> <p>Non-Examined Assessment An externally set project worth 50% of the GCSE (previously called coursework) Manufacturing processes related to timber</p> |
| <p>Useful websites</p> <p>http://www.design-technology.info/home.htm http://designmuseum.org/ http://www.bbc.co.uk/schools/gcse/bitesize/ http://www.technologystudent.com/elec1/elece.htm http://www.technologystudent.com/energy1/engex.htm</p> | <p>Useful websites</p> <p>http://www.design-technology.info/home.htm http://designmuseum.org/ http://www.bbc.co.uk/schools/gcse/bitesize/ http://www.howstuffworks.com/</p> | <p>Useful websites</p> <p>http://www.design-technology.info/home.htm http://designmuseum.org/ http://www.bbc.co.uk/schools/gcse/bitesize/</p> |
| Other ways to support learning | Other ways to support learning | Other ways to support learning |
| <p>Visit: The British Museum Design museum</p> <p>Read/Watch: Technology based magazines such as wired. Documentaries on sustainability</p> | <p>Visit: The British Museum The Design Museum</p> <p>Read/Watch: Inside the Factory (BBC) Documentaries on designing Programmes on the designing and making of machines.</p> | <p>Visit: The British Museum The Design Museum</p> <p>Read/Watch: Money for Nothing (BBC) Grand Designs</p> |

Year 10 Achievement Summary

- Be able to outline a design problem from a provided context and identify a need for a product that could solve a problem.

- Be able to investigate products to inform the product specification for a prototype, from past and present designers
- Be able to carry out a range of research strategies to gather relevant information, to inform the design specification for a prototype.
- Be able to use maths to solve subject specific problems as they arise in the design and making process.
- Be able to employ a range of Design strategies to develop designs.
- Be able to use CAD CAM to design and manufacture prototypes.
- Have an understanding of the characteristics of materials and their applications.

Year 11 Edexcel GCSE Design & Technology

| Autumn term | Spring term | Summer term |
|--|--|---|
| <p style="text-align: center;">Topics and themes</p> <p>Non-Examined Assessment- An externally set project worth 50% of the GCSE Design strategies Work of other professionals Textiles</p> | <p style="text-align: center;">Topics and themes</p> <p>Non-Examined Assessment- An externally set project worth 50% of the GCSE Programmable components Revision</p> | <p style="text-align: center;">Topics and themes</p> <p>Revision</p> |
| <p style="text-align: center;">Useful websites</p> <p>http://www.technologystudent.com / http://www.design-technology.info/home.htm http://designmuseum.org/ http://www.bbc.co.uk/schools/gcse/bitesize/</p> | <p style="text-align: center;">Useful websites</p> <p>http://www.technologystudent.com / http://www.design-technology.info/home.htm http://designmuseum.org/ http://www.bbc.co.uk/schools/gcse/bitesize/</p> | <p style="text-align: center;">Useful websites</p> <p>http://www.technologystudent.com / http://www.design-technology.info/home.htm http://www.bbc.co.uk/schools/gcse/bitesize/</p> |
| Other ways to support learning | Other ways to support learning | Other ways to support learning |
| <p>Visit: The British Museum Design museum</p> <p>Read/Watch: Technology based magazines such as wired.</p> | <p>Visit: The British Museum The Design Museum</p> <p>Read/Watch: Inside the Factory (BBC) Documentaries on designing</p> | <p>Visit: The British Museum The Design Museum</p> <p>Read/Watch: Inside the Factory (BBC) Documentaries on designing</p> |

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KS4 Curriculum Summary – Hospitality & Catering

The information below gives an overview of the topics that your child will be studying in Hospitality & Catering during years 9, 10 and 11. It also outlines how you can support your child to enrich and extend their learning outside of school.

We changed course last year, therefore the programme of study for different year groups is sequenced in a different way due to starting the course points in the 3 year KS4.

| Year 10 WJEC Hospitality & Catering Level1/2 | | |
|---|---|--|
| Autumn term | Spring term | Summer term |
| <p>Topics and themes Factors affecting the success of hospitality and catering providers Job requirements and working conditions in the hospitality and catering industry</p> | <p>Topics and themes Operation of kitchen Operation of front of house</p> | <p>Topics and themes Food safety legislation Health & safety responsibilities of employers and employees</p> |
| <p>Useful websites https://nationalcareers.service.gov.uk/job-categories/hospitality-and-food http://www.hse.gov.uk/catering/faqs.htm</p> | <p>Useful websites https://www.webrestaurantstore.com/article/5/front-of-house-vs-back-of-house.html https://ccskills.org.uk/careers/advice/article/front-of-house</p> | <p>Useful websites http://www.hse.gov.uk/catering/index.htm https://www.food.gov.uk/about-us/key-regulations</p> |
| <p>Other ways to support learning</p> | <p>Other ways to support learning</p> | <p>Other ways to support learning</p> |
| <p>Visit: Encourage children to take note of and comment on the standard of service when visiting catering establishments. Read/Watch: The hotel Inspector Inside the Merchant Beyond the hotel lobby Posh hotels with Sally and Nigel</p> | <p>Visit: Encourage children to take note of and comment on the standard of service when visiting catering establishments. Read/Watch: The hotel Inspector Inside the Merchant Fawlty Towers Beyond the hotel lobby Posh hotels with Sally and Nigel</p> | <p>Visit: Encourage children to take notice of food hygiene ratings when visiting catering establishments. Read/Watch: The hotel Inspector Inside the Merchant Fawlty Towers Beyond the hotel lobby Posh hotels with Sally and Nigel</p> |

Year 10 Achievement Summary

- Understand How different types of providers operate within the hospitality and catering sector,
- Understand how legislation is used to regulate hospitality and catering,
- understand the importance of food safety
- Understand the roles and responsibilities of professionals within the hospitality and catering sector.
- Be able to demonstrate practical skills for planning, preparing, cooking and presenting nutritional dishes to meet clients' needs.

Year 11 WJEC Hospitality & Catering Level1/2

| Autumn term | Spring term | Summer term |
|---|---|---|
| Topics and themes | Topics and themes | Topics and themes |
| Food safety legislation Health & safety responsibilities of employers and employees Factors affecting the success of hospitality and catering providers Unit 2 | Unit 2 Revision | Revision |
| Useful websites | Useful websites | Useful websites |
| http://www.hse.gov.uk/catering/faqs.htm | http://www.dtonline.org/ https://www.food.gov.uk/about-us/key-regulations http://www.hse.gov.uk/catering/index.htm | http://www.dtonline.org/ https://www.food.gov.uk/about-us/key-regulations http://www.hse.gov.uk/catering/index.htm |
| Other ways to support learning | Other ways to support learning | Other ways to support learning |
| Visit: Encourage children to take note of and comment on the standard of service when visiting catering establishments. Read/Watch: The hotel Inspector Inside the Merchant Fawly Towers Beyond the hotel lobby Posh hotels with Sally and Nigel | Visit: Encourage children to take note of and comment on the standard of service when visiting catering establishments. Read/Watch: The hotel Inspector Inside the Merchant Fawly Towers Beyond the hotel lobby Posh hotels with Sally and Nigel | Visit: Encourage children to take note of and comment on the standard of service when visiting catering establishments. Read/Watch: The hotel Inspector Inside the Merchant Fawly Towers Beyond the hotel lobby Posh hotels with Sally and Nigel |