

GCSE Design & Technology Year 11

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Topics	NEA (Non-Exam Assessment) Writing a specification Initial ideas and modelling of ideas Revision topic homework	NEA (Non-Exam Assessment) Modelling and final design drawings Revision topic homework	NEA (Non-Exam Assessment) Manufacturing a working prototype Revision topic homework	NEA and Revision Evaluation of prototype and submission of portfolio of evidence Revision of core and specialist principles			
Assessment	Self-assessment of NEA against the AQA specification criteria	Self-assessment of NEA against the AQA specification criteria	Self-assessment of NEA against the AQA specification criteria	Marking of NEA against the AQA specification criteria			

Building on Prior Learning	Students will use the skills and knowledge developed in Years 10 as the foundation for designing and making a working prototype and producing a portfolio of evidence.
Links with other subjects	This subject links with Art (sketching and creative skills), Business (income, economy, industry) Science (biomimicry, investigations, properties of materials, energy, forces and electronics – remember technology is the appliance of science!), English (annotation, evaluation, instructional and descriptive language, literacy links, extended writing), Geography (designing solutions to global issues such as climate change, ethical sourcing of materials, energy production), History (industrial revolution, inventions that changed the world), ICT (word processing, research, graphs, data processing, programming and CAD/CAM – computer aided design and computer aided manufacture), Maths (weights and measures, quantities, costings, graphs, analysis of data, geometry)
Extracurricular opportunities	On Wednesday and Thursday evenings students can continue to practise skills that will support their NEA work such as Computer Aided Design. After school revision sessions will be available later in the year. Arkwright Scholarship: DSHS have had 6 Arkwright Scholars over the past 5 years. Prospective Year 11 candidates meet every fortnight to create an engineering or design project and prepare for the Arkwright aptitude test.
A successful learner in this subject will demonstrate	GCSE Design and Technology will students will show that they can participate confidently and successfully in an increasingly technological world. Students will show awareness and learn from wider influences on Design and Technology including historical, social, cultural, environmental and economic factors. Successful students will work creatively when designing and making and apply technical and practical expertise.
Impact on personal development	Design and Technology opens up a wide range of opportunities to explore a range of issues from the world around us. Students are encouraged to work together to complete their projects and to share resources. Designing for others also develops empathy and they are encouraged to be mindful of the products they create and the impact they have on society from a moral and ethical perspective. Sustainable production and environmentally conscious design are at the heart of the subject.

Ways to support student learning in this subject



- Discuss the many careers that use the skills developed in D&T.
- Trips to interactive museums (e.g THINK Tank, National Transport Museum in Gaydon, V&A, Ironbridge, Science Museum, Design Museum, RAF Cosford) can inspire the budding designers, inventors and engineers of tomorrow.
- Students are encouraged to keep sketch books, take photographs and collect examples of innovative and creative designs.
- There are many free software programs that students can download or access online to develop their CAD/CAM skills. These include Sketchup, Autodesk Fusion 360, Autodesk Inventor and Blender. Many students have designed products at home and then had them manufactured on the school's 3D Printer.
- Look out for any design and creative competitions on TV, radio, or in the newspaper – these can be a fantastic way to get excited about designing and creating! Several DSHS students have found success in competitions, winning prizes and enhancing career prospects.
- Programs like 'How It's Made?' and 'The Gadget Show' introduce students to a range of innovative products and improve their understanding of how our world is made.
- Students are encouraged to read books, magazines (Wired) and articles about design and innovative products on-line (Dezeen, Design Boom, Interesting Engineering)
- When completing homework tasks 'go the extra mile' and thoroughly research the topic areas, practice making models in 3D from resources found at home including card and Lego.
- Students are encouraged to enjoy and have fun in Design and Technology
- Students should be encouraged to make mistakes and learn from them.