

WJEC GCSE Design and Technology

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A designer dreams of things that never were, and says, 'why not?' Product design is a field that brings together art, business and engineering. At the same time, you're developing new concepts, and you're coming up with ways to market those concepts within the design. You're mixing aesthetic tastes, functionality and financial considerations in a way that few other jobs allow people to do.



Core knowledge and understanding

- Impact of new and emerging technologies.
- Evaluation of new and emerging technologies.
- Energy.
- Modern and smart materials
- Ecological and social footprint.
- Investigating and analysing the work of others.

Unit 1:

Externally examined

A mix of short answer, structured and extended writing questions assessing candidates' knowledge and understanding of the core and in-depth knowledge of **one** area selected from:
engineering design
fashion and textiles
product design.

Unit 2:

Internally marked externally moderated.

A sustained design and make task, based on a contextual challenge set by WJEC, assessing candidates' ability to:
identify, investigate and outline design possibilities
design and make prototypes
analyse and evaluate design decisions and wider issues in design and technology.

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The core skills that learners are required to develop and apply are presented in nine topic areas:

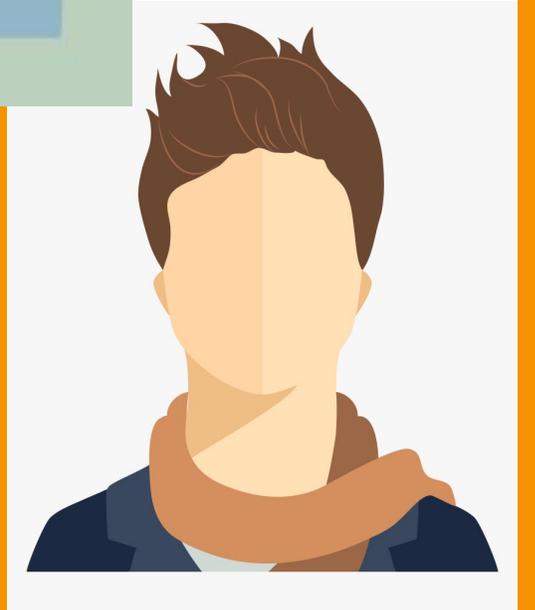
- Understanding design and technology practice takes place within contexts
- Identifying and understanding user needs
- Writing a design brief and specifications
- Investigating challenges
- Developing ideas
- Using design strategies
- Communicating design ideas
- Developing a prototype
- Making decisions

Learners are required to cover all of the content in these areas, to ensure they are able to apply a broad knowledge and understanding of design and technology principles within design and make activities.

Staff

Mr David and Mr Evans are the subject specialist for Design and Technology.

All classes will be taught by either Mr David or Mr Evans.



Careers

THERE ARE MANY CAREERS RELATED TO DESIGN AND TECHNOLOGY. THEY FALL INTO TWO GENERAL GROUPS:

- Careers related to design and product development
- Practical careers where you make or mend things

Besides the knowledge you gain through the subject, studying design and technology helps to develop skills like logical thinking, problem-solving, working within a team, research, computing and planning – which are useful in many different career areas.

PRACTICAL CAREERS, WHERE YOU MAKE OR MEND THINGS

- Jobs in construction
- Carpentry and joinery
- ICT: sales and technical support
- Model making
- Land-based engineering
- Domestic appliance servicing
- Industrial machinery servicing
- Shipbuilding and boatbuilding
- Rural crafts
- Dental technology
- Medical physics and technology development

TEXTILES OR FASHION

Textiles (fabric and threads) is the medium through which students will draw, design, experiment and investigate in response to a theme, title or design brief.

PRODUCT DESIGN

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ARCHITECTURE

Studying Architecture will give you a thorough understanding and appreciation of the structures in which we live today. Become a Brilliant Problem Solver, as it teaches you to take a pile of data and information and interpret it to design a building or solve a problem.

ENGINEERING

Engineering is the designing, testing and building of machines, structures and processes using maths and science. Studying it can lead to a rewarding career. Engineering is a discipline dedicated to problem solving.

Pupil
views

"I like Product Design as it gives you loads of chances to be creative and design your own things. You also get a chance to analyse other products and model your own."

"In my opinion product design is a unique and fun way to express yourself by allowing your mind to run with ideas of what to make"

"I believe that product design is a thoroughly enjoyable subject as it allows you to express your inner creativity in your own way"

"I enjoy Product Design because, my teacher is a cool guy, and we get to make things using the 3D printers and Laser cutters. I also get to use tools and equipment in the workshop."

<https://www.youtube.com/watch?v=4ILSEDVSAp4>

