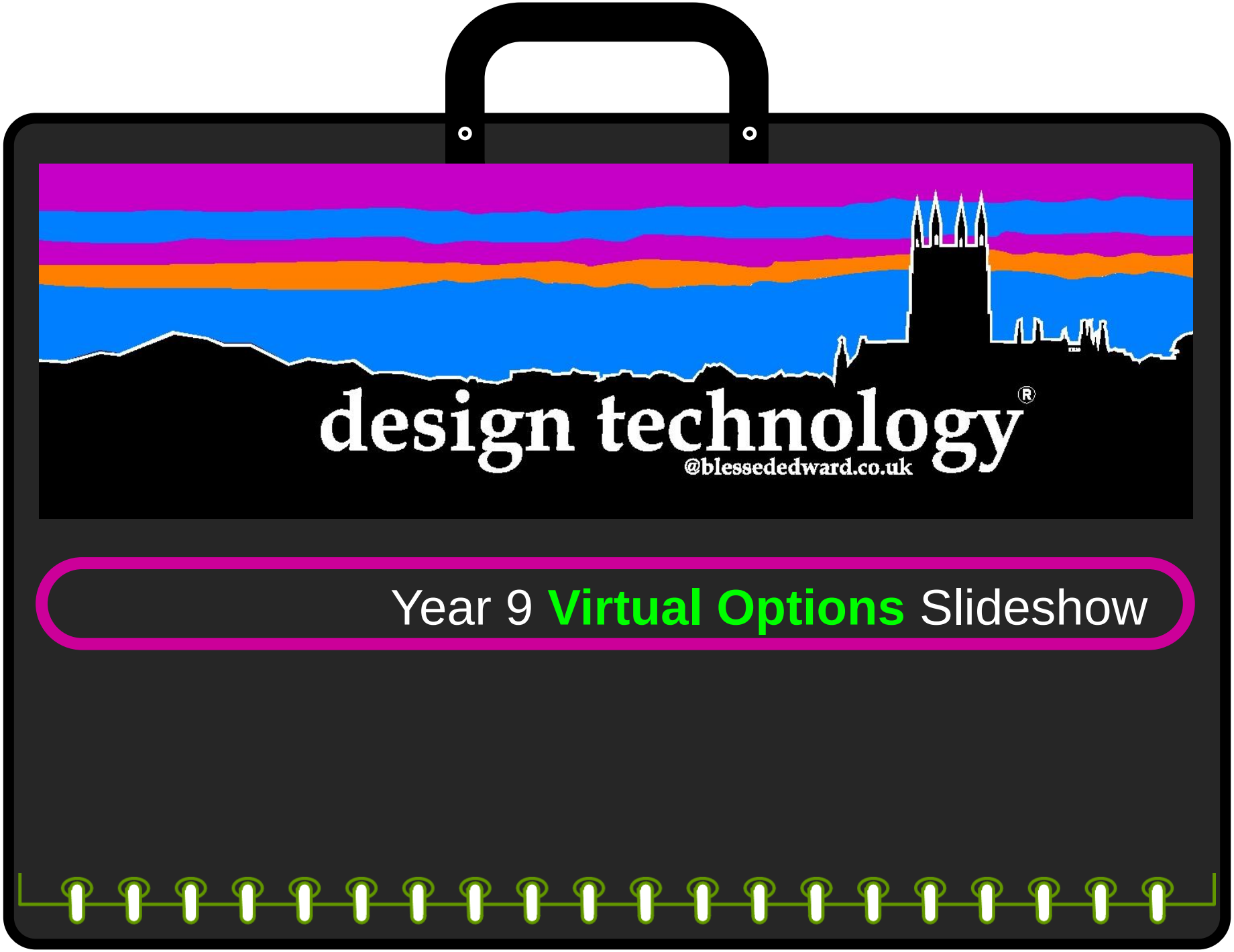


Year 9 **Virtual Options** Slideshow

Design & Technology

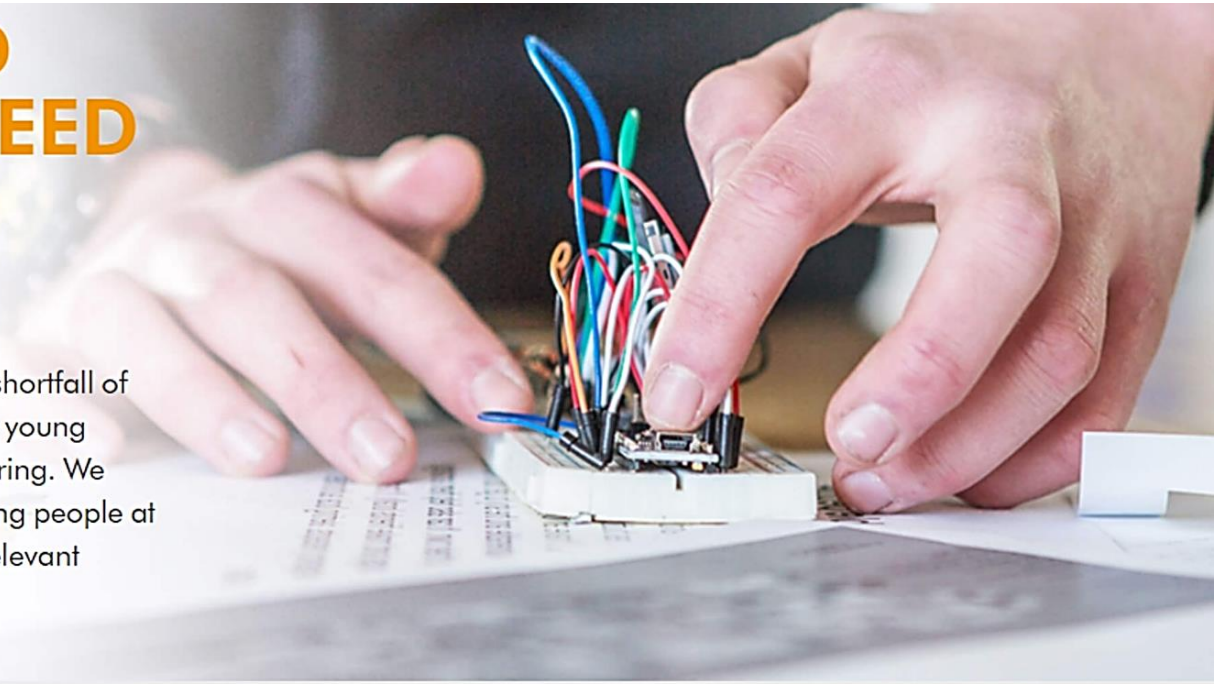
What is Design & technology?

Design & Technology is a subject that provokes students to think critically and outside of the box, to be inventive, creative, and pragmatic, it provides opportunities for creative invention and a chance to apply acquired knowledge from maths and science into working practical prototypes.

Design & Technology

Why choose Design & technology?

REAL-WORLD PROBLEMS NEED PRACTICAL MINDS



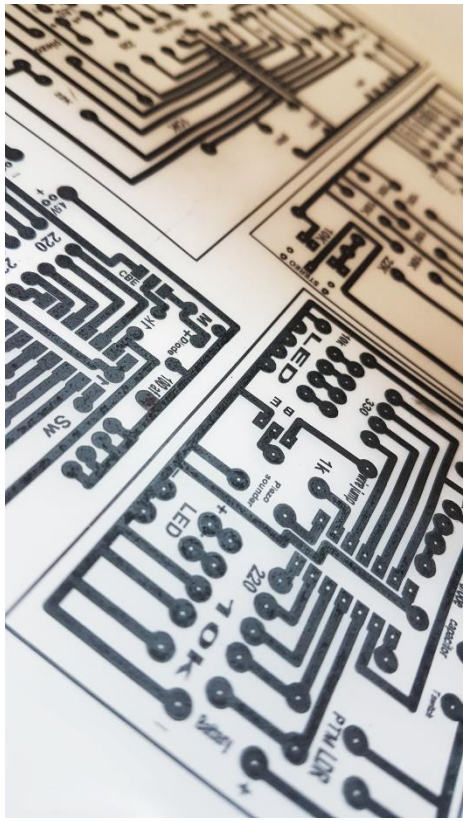
The UK is struggling with an annual shortfall of 59,000 engineers. So we need more young people to choose a future in engineering. We believe the solution is to engage young people at an early age with exciting, industry relevant Design and Technology lessons.

"Design and Technology should be as riveting and relevant as the career it channels into. Logical, creative and practical, it's the only opportunity that school students have to apply what they learn in maths and science – directly preparing them for a future in engineering."

James Dyson

Design & Technology

Is Design & technology for me?



If you have enjoyed designing and making things during key stage 3 and you like to be active, building practical projects then D&T is definitely a subject that you will enjoy.

Much of the learning is delivered through practical activities

Design & Technology

Why choose Design & Technology?

At Blessed Edward Oldcorne, we believe that Design & Technology is vital for our students to become inquisitive, curious and imaginative young adults, able to investigate, explore and analyse the increasingly technical world in which they find themselves.
We want our students not simply to accept things as they are and instead ask Why not? and What if?

Abbie designs spacecraft!

"D&T was my favourite subject at school – the one time that I got to apply my creativity and problem solving skills to the creation of new products, and see my ideas become reality."

Abbie Hutty MEng (Hons) CEng FIMechE MIET
Lead Spacecraft Structures Engineer, ExoMars Rover Project
Airbus Defence and Space

Design & Technology

Where could Design & Technology take you?

For everyone GCSE D&T opens the door to a wide range of careers in the creative, engineering and manufacturing industries. It is also excellent preparation for careers in many other fields e.g. medicine, law and computer science. Whatever career you choose, the knowledge and skills you learn, particularly those concerned with rapidly developing technologies, will be extremely valuable. You will also develop skills, such as teamwork and time management which are highly prized by employers.

D&T supports a wide range of careers!

"Design and Technology teaches young people to 'think with their hands.' The ability to use tools and materials to solve problems is vital, and is as important in medicine and surgery as in the jeweller's workshop or the sculptor's studio. Now more *than ever, D&T is a crucial subject for every young person."*

Professor Roger Kneebone Professor of Surgical Education and Engagement Science, Imperial College London

Design & Technology

Where could Design & Technology take you?

DESIGN

Product design
Robotics
Industrial
Automotive
Carpet manufacture
Fashion/haut couture
Interior design
Packaging
Games industry
Advertising
Marketing
Digital media
Publishing
Film and media

ELECTRONICS and SYSTEMS & CONTROL

Robotics
Computing
Digital media
Transport
Broadcasting
Security
Armed forces
Electronics
Aerospace
Automotive
Services & infrastructure

ENGINEERING and CONSTRUCTION

Civil engineering
Construction
Mechanical engineering
Robotics
Armed forces
Electronics engineering
Aerospace
Automotive engineering
Services & infrastructure

Design & Technology

What skills and understanding will you develop?

You will learn how to **analyse information** and **make decisions**, you will have opportunities to **experiment** with **new innovative ideas**. You will develop **problem solving skills** that are so vital to almost all areas of working life as well as further education.

You will have the opportunity to be **creative**, **communicate ideas effectively**, tackling a variety of challenges working with a wide range of materials to **solve real practical problems**. You will develop **technical knowledge** and the ability to **critically evaluate** products that you and others have developed.

Design & Technology

What skills and understanding will you develop?

DESIGNING

Learn how to design high-quality products

Come up with imaginative, original ideas

Create designs that are appealing and work well

PROBLEM SOLVING

Identify and understand real problems

Research what people need, want and value

Take risks, try different things and learn from your mistakes

COMMUNICATION

Use sketches and plans to communicate ideas

Make models to show your designs

Talk clearly about your work

MAKING

Learn how to make high-quality products

Use different tools, techniques and equipment

Use different materials, components and ingredients

EVALUATION

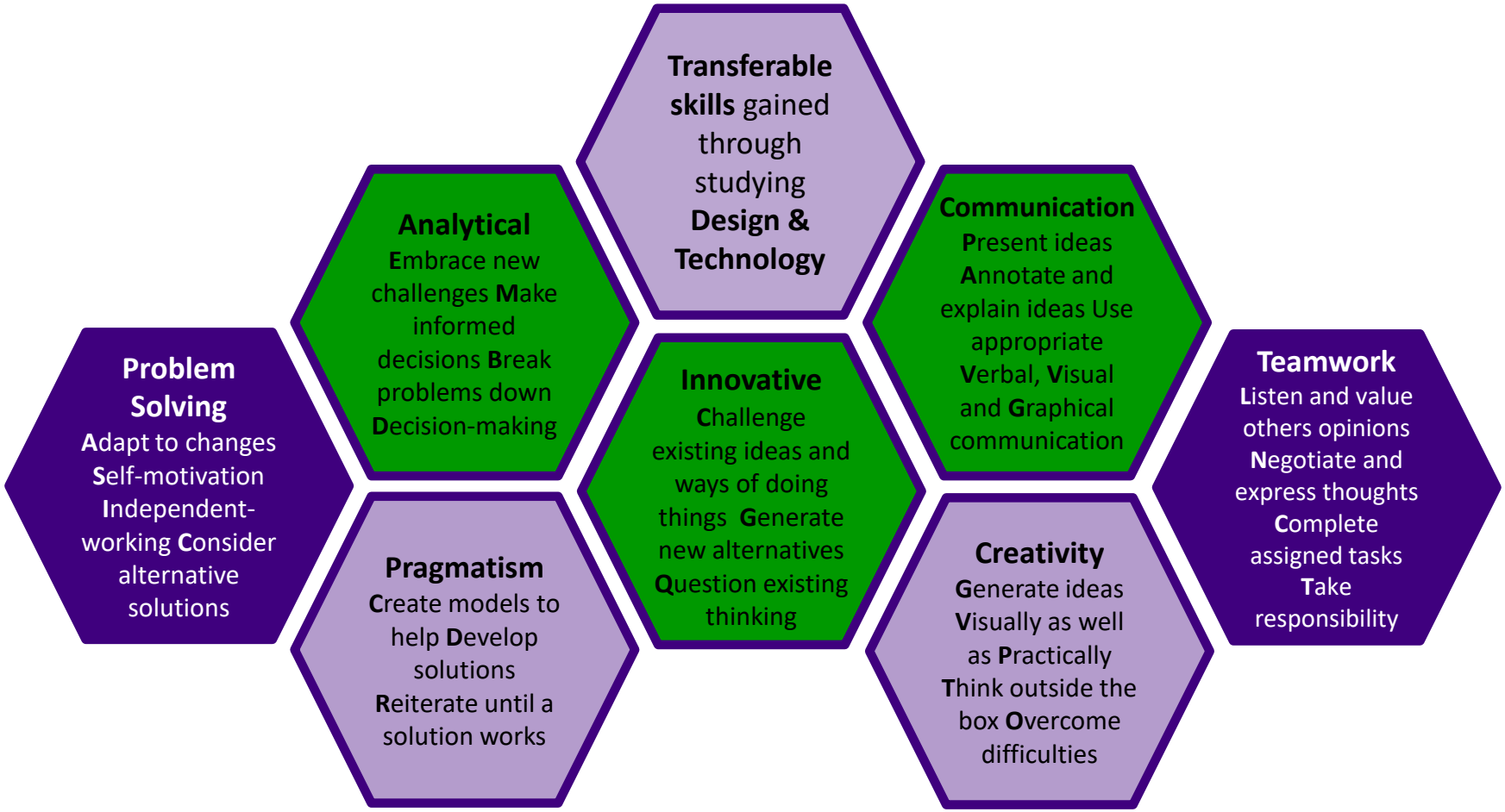
Analyse other people's designs

Test and evaluate your own ideas

Think about how to improve your work

Design & Technology

What transferable skills will you develop?



Design & Technology

Core Knowledge & Understanding

All students study the core knowledge topics listed below.

- **Design and technology and our world**
- **Smart materials**
- **Electronic systems and programmable components**
- **Mechanical components and devices**
- **Materials**

Design & Technology

What D&T options are available?

We currently offer two similar but distinct options.

- **Design & Technology Resistant Materials**
- **Design & Technology Systems & Control**

Both options are taught through practical problem solving tasks.

D&T
Resistant Materials
Students will focus on designing and making using woods, plastics and metals to create solutions.
You will develop specialist skills in the use of tools and processes used to create working prototypes

D&T
Systems & Control
Students will focus on designing and making electronic and mechanical solutions.
They will develop specialist skills in the use of tools and processes used to create working prototypes

Design & Technology

Resistant Materials Option

Students will study at the following **three topics** in greater depth.

- **Natural & manufactured timber**
- **Ferrous & non-ferrous metals**
- **Thermosetting & thermoforming plastics**

Design & Technology

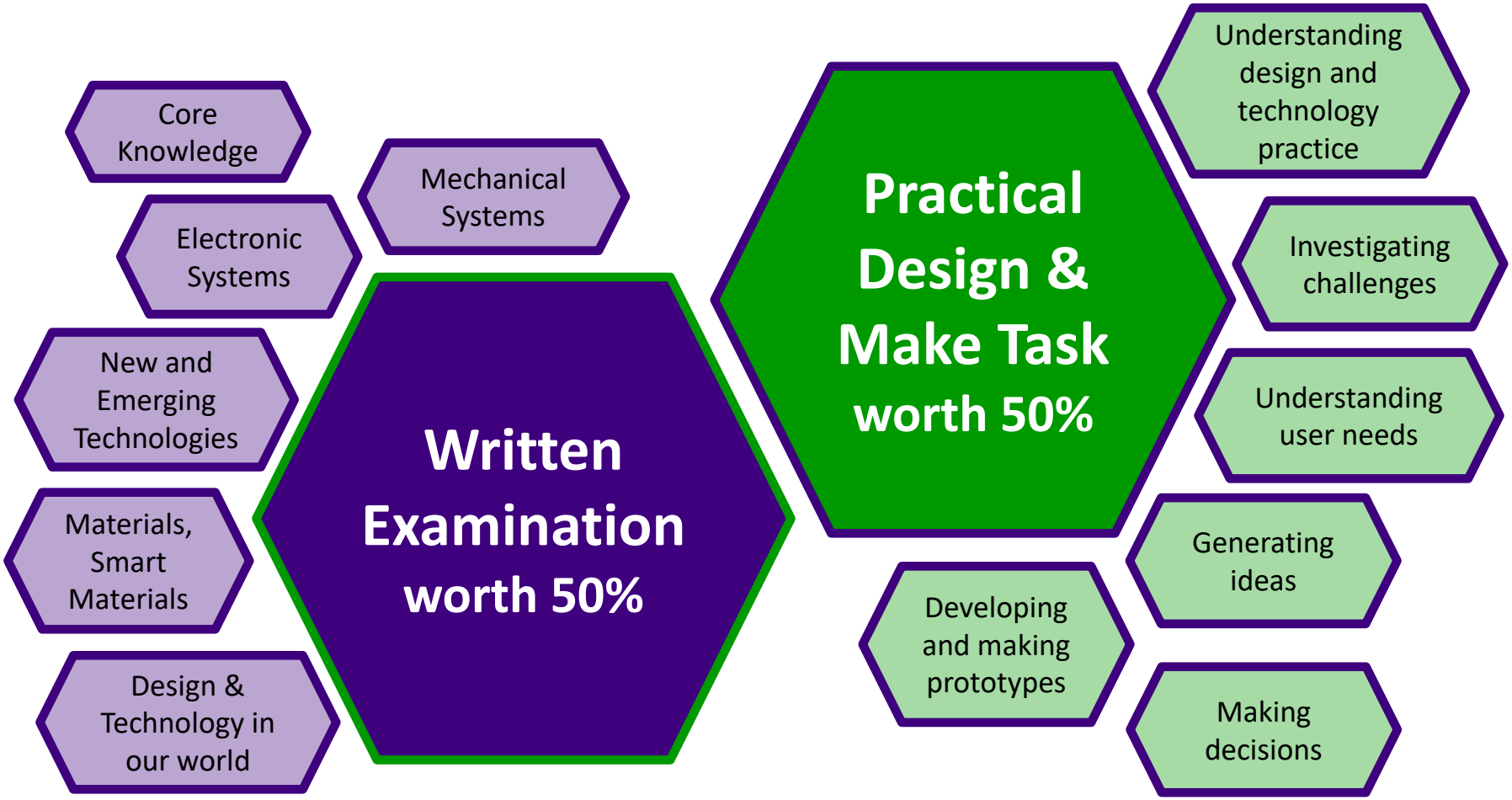
Systems & Control Option

Students will study at the following **three topics** in greater depth.

- **Electronic systems** and **programmable components**
- **Mechanical components** and **devices**
- **Thermosetting** & **thermoforming** plastics

Design & Technology

What is examined to achieve the GCSE?

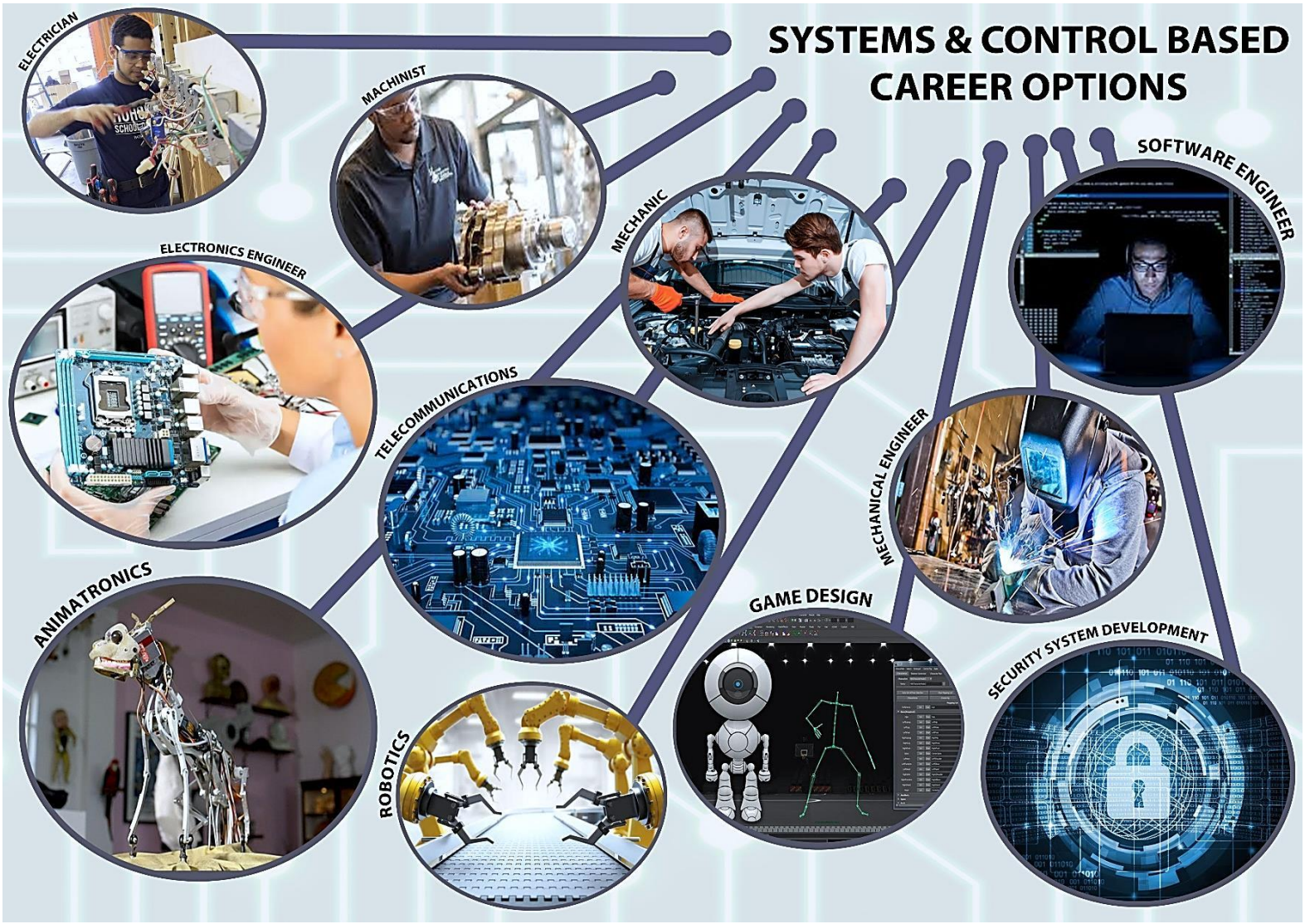


Design & Technology

Career Opportunities

Design & Technology

Career Opportunities



Design & Technology

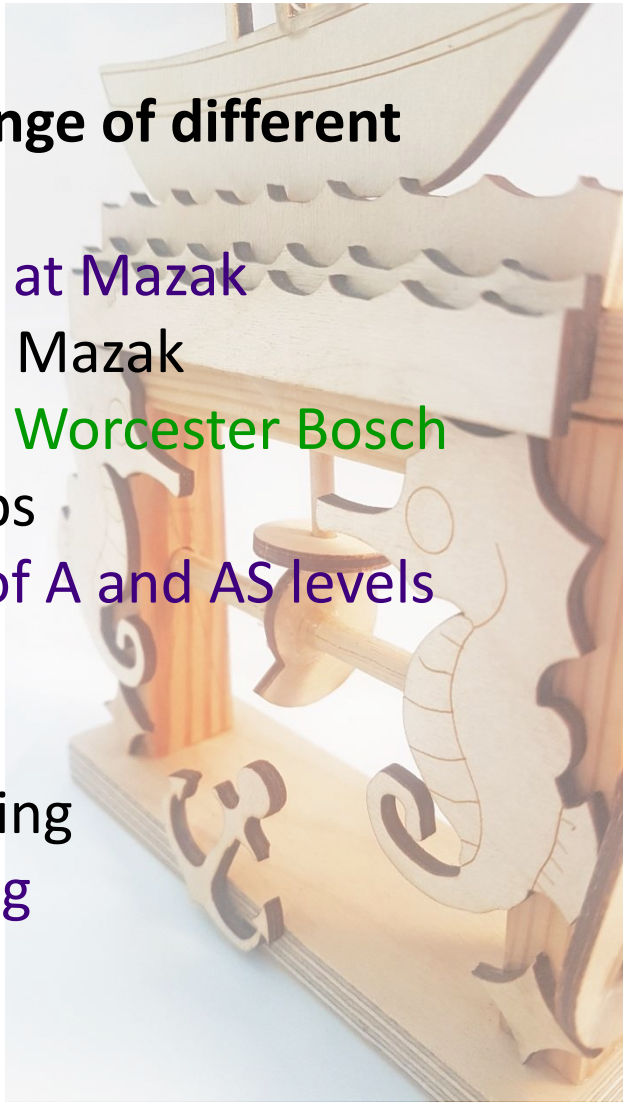
Career Opportunities

Design & Technology

Former Students - Alumni

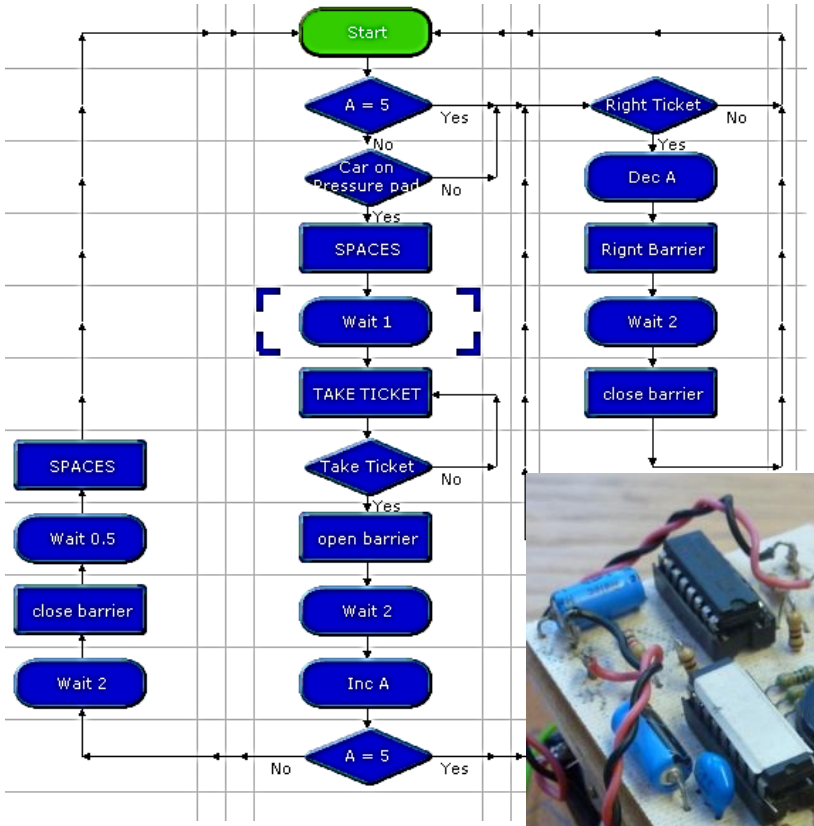
Past D&T students have followed a wide range of different educational and work-based pathways:

- Mechanical Engineering apprenticeships at Mazak
- Electrical Engineering apprenticeships at Mazak
- Mechanical Engineering apprenticeships Worcester Bosch
- Worcester Group training apprenticeships
- Worcester Sixth form to study a variety of A and AS levels
- University to study Architecture
- University to study Graphic Design
- University to study Mechanical Engineering
- University to study Electronic Engineering
- Rolls Royce Automotive Engineering
- University to study Marine Engineering



Design & Technology

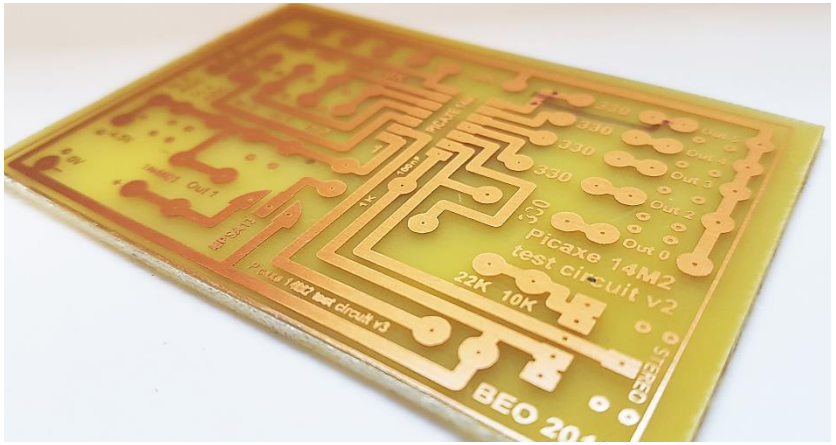
Systems & Control

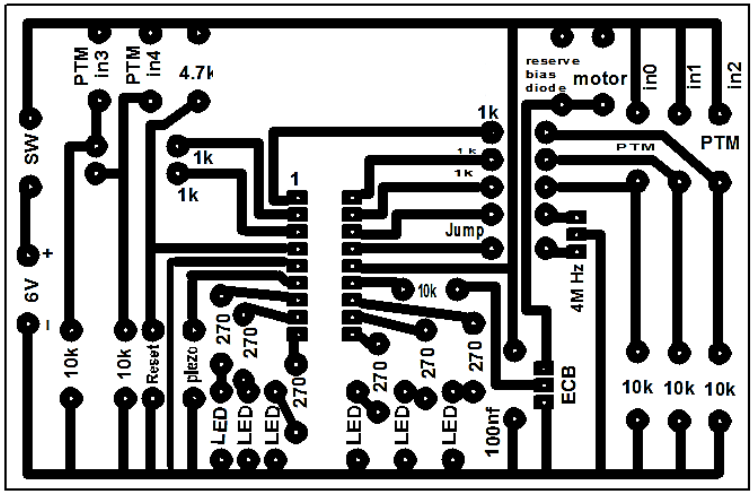


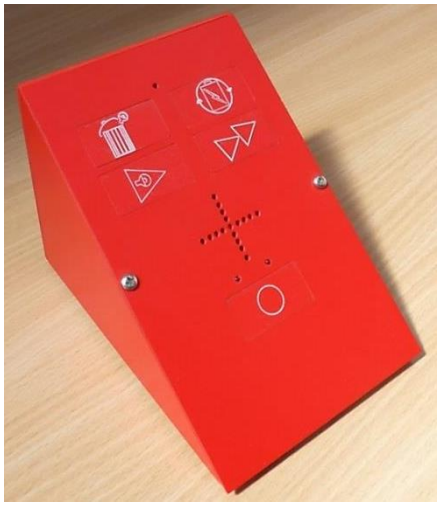
Former Students Work

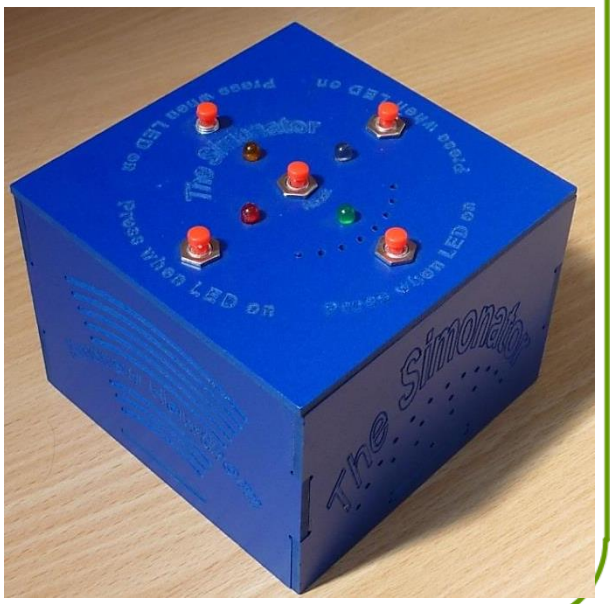
Design & Technology

Systems & Control





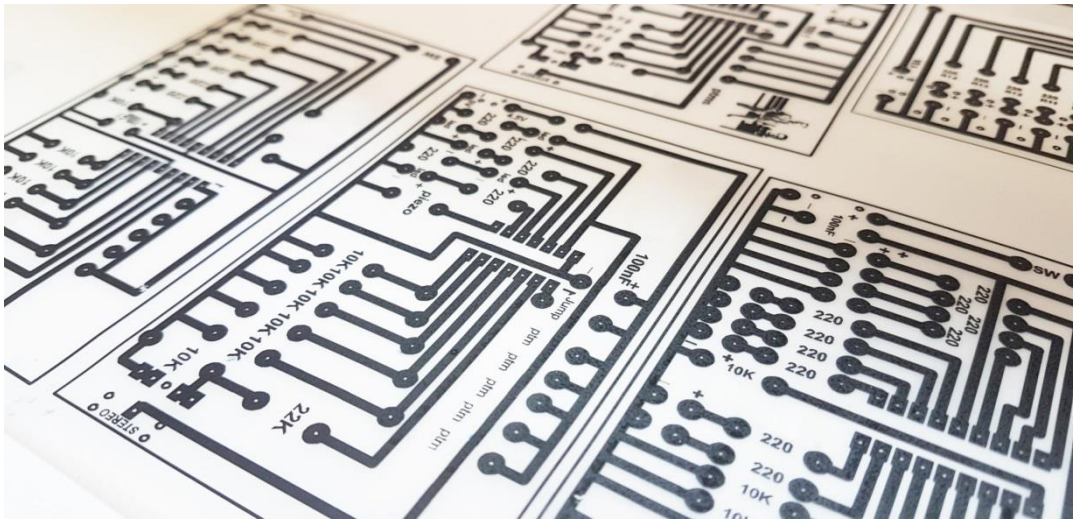


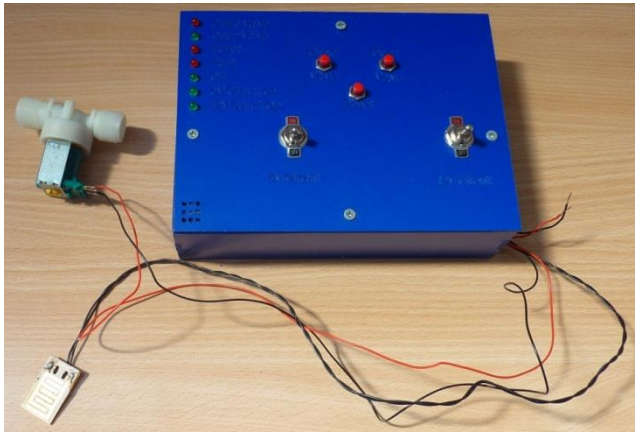


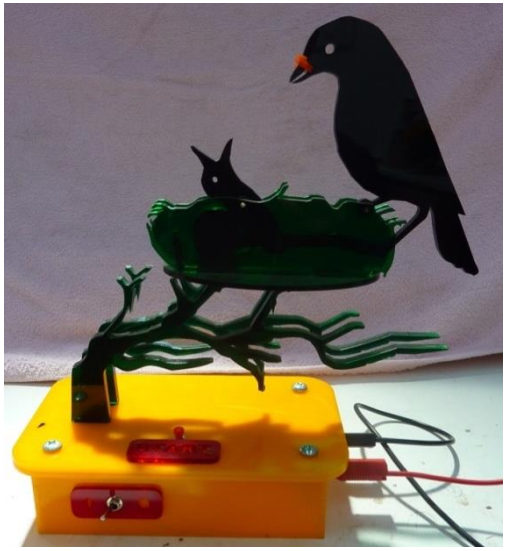
Former Students Work

Design & Technology

Systems & Control







Former Students Work

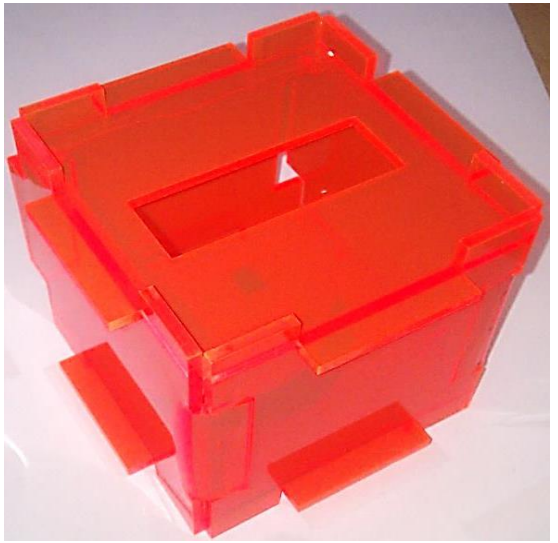
Design & Technology

Resistant Materials

Former Students Work

Design & Technology

Resistant Materials



Former Students Work

Design & Technology

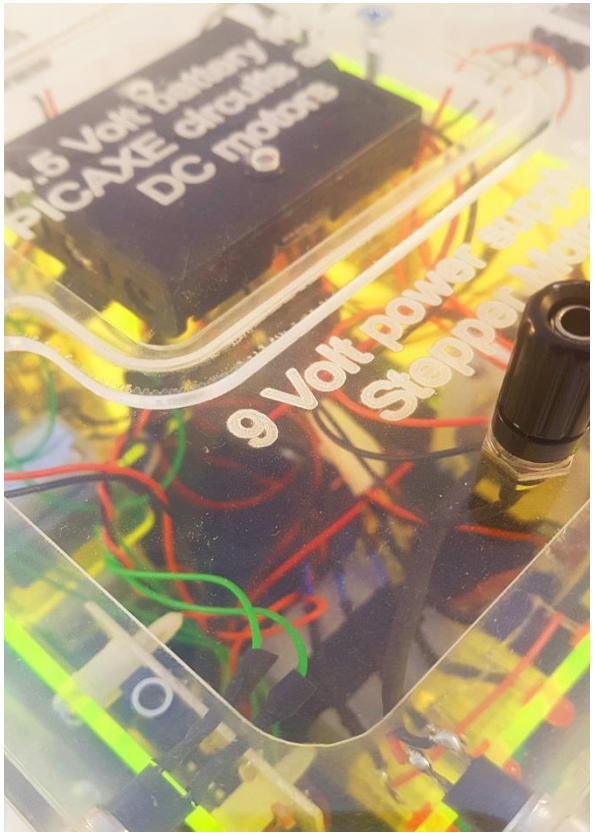
Growth sectors in future areas of employment:

- Applying technological solutions to manmade problems such as the environmental impact of past industrial processes.
- A digital future in sectors such as communications, engineering, textiles, medical industries, transportation, robotics and AI.
- Jobs that didn't exist until recently and don't exist yet! The future economy and the role of D&T
- We need to make the world better, safer and cleaner and the UK leads in designing and developing new processes and products that lead to this.
- D&T is vital to the economy with areas such as fashion and textiles, the creative industries and engineering contributing massively to our futures.

Design & Technology

Why D&T is important to our students:

- To understand what people want
- Create fantastic designs using new tools, material and processes
- Make brilliant products using CAD, CAM and 3D printing
- Work in teams and individually
- Develop empathy and a connection to others
- Understand materials
- Understand how things work
- Have the freedom to be creative
- Design and make real things
- Solve real-world problems
- Future proof their prospects
- Have control over their lives and environment



https://www.youtube.com/watch?v=4lLSEDVSAp4&feature=youtu.be