

EXCELLENCE
awards
2021



Celebrating Excellence in Design and Technology Education

The Institution of Engineering Technology,
2 Savoy PI, London, WC2R 0BL

Friday 17th September 2021

In partnership with the





EXCELLENCE
Awards
2021

Celebrating Excellence in Design and Technology Education



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Welcome



Lesley Morris

Chair of the Board of
Trustees, Design and
Technology Association

On behalf of the Design and Technology Association - welcome! This is our 21st Excellence Awards event and I'm delighted to be hosting this awards ceremony live following a virtual ceremony held last year due to restrictions imposed by the COVID pandemic.

This year we are still working with COVID restrictions but with the help and support of our partners at the IET, I am delighted to be able to welcome winners not just from this year, but also those who won awards last year but were unable to attend in person.

There continue to be many excellent examples of teaching and learning in D&T, and I am delighted that we can showcase the best in these annual awards. I would like to thank everyone who nominated a colleague for this year's awards and thank all our winners for your hard work, dedication and amazingly high standards in what was the most testing of years - your work demonstrates just how important our subject is and what a positive impact it can have on young people's development.

I'd also like to offer a huge thank you to all the organisations, partners and supporters who have sponsored our awards, including the IET for providing the venue for us to hold this awards ceremony. Without their help and continued support, this evening would not be possible. I would also like to welcome all our Blueprint 1000 member organisations here tonight. It's great that such prestigious organisations recognise the importance of the subject and value the essential contribution to design and technology education that schools, colleges and individual teachers make.

This event is all about celebrating the brilliant work of talented and dedicated professionals in design and technology education and I do hope that all the winners and everyone present will enjoy the evening.

A handwritten signature in black ink, appearing to read 'L. Morris'.



Tony Ryan

Chief Executive,
Design and Technology
Association

Welcome to this year's annual awards ceremony. I am delighted that we have been able to arrange this event with the help of our friends and colleagues at the IET. This is my fourth awards ceremony as CEO. However, I will openly admit that last year's event was somewhat different as we beamed winners live into Zoom calls on the big screen in the IET auditorium downstairs.

I would like to congratulate winners from both last year and this year who are present tonight. It is an absolute privilege and a joy to host a celebration of everything good that is taking place in design and technology education across the UK and beyond and is arguably more important than ever to do so after the most challenging of years.

I would also like to welcome staff from ten UK schools who made a significant positive impact on PPE provision to the NHS, care homes, doctors' surgeries, and other frontline services. Those here tonight represent teachers, technicians, and students nationally as we recognise the vital role that design and technology played when it was most needed last year.

We are living through interesting and challenging times. The world is changing fast, and the pace of change within technological development is creating jobs and placing demands on our young people that simply did not exist just a few years ago.

It is more important than ever for the UK to develop our young people's design, technological, and entrepreneurial skills, inspiring and nurturing the next generation of innovators, designers, and visionaries. Our awards ceremony allows us to highlight just some of the excellent practice that takes place in primary and secondary schools, initial teacher education and teacher professional development nationally.

As your Chief Executive, my role is to ensure that the Association champions the subject and supports its members, making membership an essential tool for school improvement and continued professional development. The last year has been challenging, and we, alongside every other organisation nationally,

have had to change and adapt to the challenges that have been presented. I am delighted to report that our membership has almost doubled this year and now stands at over 24,000.

Blueprint 1000, which you will hear us refer to several times this evening, was, for obvious reasons, put on hold during the worst of the pandemic but is now gathering pace; I would like to welcome all our Blueprint members here tonight; thank you for your support. This initiative exists to connect education and industry to help ensure that D & T continues to be included as part of a broad and relevant curriculum for all, a curriculum that will equip young people with the knowledge, skills, character sets and confidence essential for 21st-century work and life.

As your professional Association, we continue to lobby the Government to highlight and promote the importance of our subject both in its own right and as an essential facilitating subject for a successful career in any one of a multitude of business sectors. We are delighted to announce that the paper that we have worked on for over two years with our partners at the Royal Academy of Engineering and to which so many of you contributed evidence, is set to be launched next month.

I would like to thank everyone who nominated a colleague for this year's awards and thank all our winners for your hard work, dedication and amazingly high standards demonstrated - your work demonstrates just how vital our subject is and what a positive impact it can have on young people's development.

We could not undertake the wide range of activities that we do without the support of over 24,000 members from education, industry and business, and, on their behalf, I would like to join with Lesley in congratulating all our award winners and thanking you for joining us this evening to celebrate their achievements.

A handwritten signature in black ink, appearing to read 'Tony Ryan', located at the bottom right of the page.

Order of Ceremony



7.00pm	Drinks Reception
7.30pm	Welcome by Tony Ryan
7.35pm	Starter
7.55pm	Introduction to awards by Lesley Morris Presentation of categories 1 - 4
8.20pm	Main course
8.40pm	Presentation of categories 5 - 9
9.05pm	Dessert and coffee
9.25pm	Presentation of categories 9 - 13
10.00pm	After dinner speech
10.30pm	Closing speech by Lesley Morris

Order of Presentation

Category 1:

Boxford Ltd Award for Innovation and Creativity in Design and Technology

- Paul Woodward, *The Rugby School, Thailand*

Category 2:

Inspirational Teaching of Design and Technology – Primary Award

- Gill Fitzpatrick, *Beech Hill Community Primary School, Greater Manchester*

Category 3:

HME Logistics Award for Inspirational Teaching of Design and Technology – Secondary

- Sarah Mahmood, *The Bemrose School, Derbyshire*

Category 4:

James Dyson Foundation Award for Excellence in Engineering Education

- Martin Davies, *The Fernwood School, Nottinghamshire*

Category 5:

Institution of Engineering and Technology Award for Creative use of Digital Technologies in Design and Technology

- Daniel Wahab, *Woldingham School, Surrey*

Category 7:

Development of STEM Learning Opportunities Award

- Leanne Mee, *The STEM Workshop, Shropshire*

Category 8:

Royal Academy of Engineering Award for Exceptional Pupil Achievement

- Vivika Martini, *Highgate School, London*

Category 9:

Design and Technology Subject Leadership Award

- Amanda Britton, *Twynham School, Dorset*
- Claire Marshment, *Weeke Primary School, Hampshire*

Category 10:

Supporting Design and Technology Award

- Robert Hodge, *WMG Academy for Young Engineers, Warwickshire*

Category 11:

Heart Educational Award for Design and Technology Teacher Education

- Alan Bright, *Goldsmiths University of London*

Category 12:

N.E.J. Stevenson Award for Outstanding Contribution to Design and Technology

- Paul Shallcross

Category 13:

Onshape Special Award Recognising Design and Technology's Social Impact

- Andrew Duffey, *Merchant Taylors School, Hertfordshire*
- David Clay, *Priory Community School, North Somerset*
- Helen Vardy, *King Ecgbert School, South Yorkshire*
- Kirby Dowler, *John Taylor High School, Derbyshire*
- Michael Noonan, *Queen Elizabeth's Barnet, Hertfordshire*
- Sam Booth, *Bradfield School, South Yorkshire*
- Shakeel Rathore, *Longdean School, Hertfordshire*
- Steve Newton, *Stamford School, Lincolnshire*
- Stuart Sweetman, *King Henry VIII School, West Midlands*
- Tim Weston, *Oakham School, Rutland*

Keynote Speaker



Sophie Harker

BAE Systems Graduate Scheme

What happens when on a family holiday to California, you pop into the Kennedy Space Centre as a sixteen-year-old and there and then decide that you want to go to space?

In Sophie Harker's case, you come back and get your head down to achieving academically what you are capable of. A love of Mathematics led to a Masters Degree course at Nottingham, where she met the first British astronaut, Helen Sharman. In conversation, Sophie was advised that engineering is the best pathway to space. And the rest is pretty much history.

Sophie joined the BAE Systems Graduate Scheme, consisting of four engineering placements across various platforms and products, including the Eurofighter Typhoon. Sophie is currently embedded in the Team Tempest project working on advanced technologies for flight control systems.

Sophie is one of the youngest engineers to have achieved chartered status at the age of only 25. In 2016 she became the BAE Systems Technical Graduate of the Year; SEMTA made her their Graduate of the year in 2017; in the same year, she was featured in the Daily Telegraphs Top 50 Women in Engineering. In 2018 Sophie was awarded the Bee Beaumont Award - Awarded to 'newly qualified engineers who have made an outstanding contribution to the business in the early stages of their career'. Also, in 2018, Sophie won the IET Young Woman Engineer of the Year and more recently was awarded the Sir Henry Royce Medal, which recognises her research in developing future technologies for the aviation history.

By Sophie's own admission, she did not set out on a mission to win these awards; in fact, she is slightly embarrassed; these awards sprung from a career doing something that she loves to the very best of her ability.

To hear more about Sophie's journey, you can find this on our podcast, *Designed for Life* In conversation with Sophie Harker.



Category 1

Boxford Ltd Award for Innovation and Creativity in Design and Technology



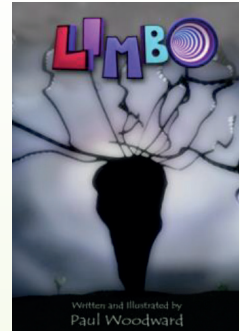
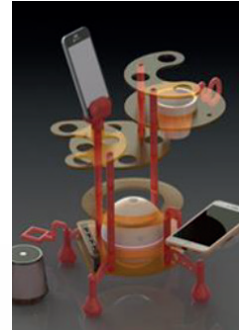
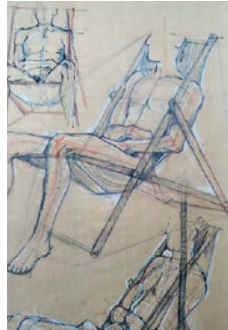
Paul Woodward

Rugby School,
Thailand

Paul has spent almost 30 years working as a designer and D&T teacher, illustrating, writing, developing resources and supporting fellow teachers. He has worked in a variety of schools and has established and led D&T and Creative faculties. Paul has worked for the Association as a trainer and consultant, developing training courses when the new curriculum was released. He has released an inspiring and aspirational exemplar NEA folder for D&T teachers.

Recently he moved to Rugby School in Thailand where the department's work has featured in D&T Association publications. Paul's love of the subject shines through; he continues to produce resources and training materials for teachers, particularly in CAD/CAM and 3D design. Paul set up a forum where he invited teachers to discuss, share and develop teaching resources. His supportive and encouraging manner gives members the freedom to ask questions, share ideas and challenge concepts.

In 2016, Paul left teaching to work full time as a designer. He felt that he needed to experience working full time in industry if he was to inspire his students to follow the same type of career. Despite a gruelling schedule which saw him promoted to Head of the design studio in just two months, he once again demonstrated his commitment to D&T by writing a collection of over 100 blogs for the TES and elsewhere.



boxford

Category 2

Inspirational Teaching of Design and Technology – Primary Award

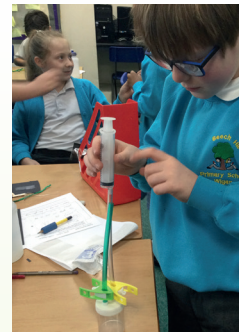


Gill Fitzpatrick

**Beech Hill Community
Primary School,
Greater Manchester**

Gill has gone above and beyond during lockdown to ensure pupils had continuous access to high quality, engaging D&T, and engineering projects. Her approach to teaching, which includes resource packs for hands on learning, focused tasks, remote face to face sessions and recorded tutorials led to innovative work submission, with pupils thinking and working creatively as designers and engineers. Raising aspiration is a key aim of the school which is in an area of high deprivation. She has spent time with other schools, to support them in their journey to develop an outstanding D&T curriculum that suits their individual schools' needs.

Gill consulted colleagues at Manchester University (Science & Engineering Education Research and Innovation Hub) to share ideas on projects and her work continues with them as part of the progressing to be an engineer project. This has enabled the pupils to take part in enrichment activities that enhance and elevate D&T and raise the profile of STEM subjects within school. Gill has been invited to join the team from the Faculty of Engineering at Manchester university to give a talk about design and technology and engineering in primary schools at the annual conference of the Association for Science Education in Sheffield. Gill's passion for design and technology has motivated her colleagues within school and beyond.



Category 3

HME Logistics Award for Inspirational Teaching of Design and Technology – Secondary

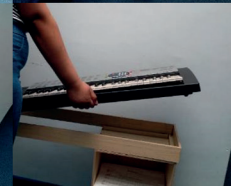
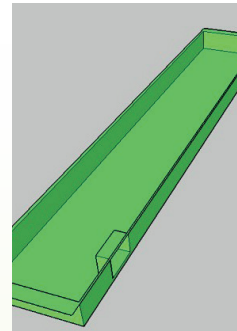
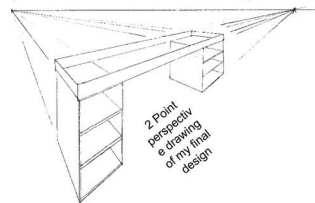


Sarah Mahmood

The Bemrose School,
Derbyshire

Sarah joined Bemrose School in 2017 after completing her PGCE at Nottingham Trent University. Bemrose is a large school with a high level of pupils from disadvantaged backgrounds. When she joined the school the D&T results were low, and the new Design and Technology GCSE was just being introduced. Many of the boys in her Key Stage 4 groups did not initially respond well to a young Muslim woman teaching D&T. The challenges to Sarah in her first year, were immense.

Sarah's determination, inspirational teaching style, enthusiasm for the subject, perseverance and charm has meant that she engaged the students and won the reluctant boys around. She continued her professional development by attending training courses and established a new KS3 and 4 curriculum. She introduced a STEM club and other extracurricular activities, including industry trips to Rolls Royce to expand the opportunities that are available to the students. Structuring their learning has allowed them to cover technical knowledge so that the students are confident to develop their own original projects. The exam grades achieved by students has now greatly increased.



Engineering a Creative Environment

Category 4

James Dyson Foundation Award for Excellence in Engineering Education



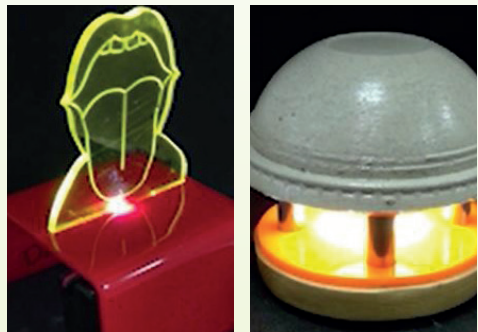
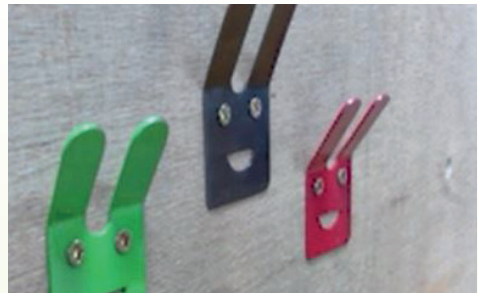
Martin Davies

The Fernwood School,
Nottinghamshire

Martin has dedicated his entire working life to teaching and inspiring students. For most of his career he has focused on resistant materials, but over the last ten years he has enthusiastically led engineering within the school and is now a vocal and passionate advocate for it at every level. The conversion rate Martin has for his students is astounding with a significant number continuing their studies of engineering post KS4, and many going on to be fantastic engineers.

Martin has spent the last two years overhauling our CNC equipment to maximise its potential. He wants the best for his students at every level. For example, one course requires students to expertly machine a given part. He wasn't happy that the part issued by the exam board allowed students to create anything with ambition so following discussions with the chief examiner arranged for something he developed to be used in its place which allowed for the comparison between a CNC version and hand machined version.

Martin entered the department into 'Formula Schools', and for three years running has won the Engineering Award due to the huge volume of work the students had done. For several years Martin has run extra curricula clubs from rocketry clubs, aero engineering modelling clubs, radio control car clubs... anything which will inspire the next generation of engineers.



THE
JAMES
DYSON
FOUNDATION

Category 5

Institution of Engineering and Technology Award for Creative use of Digital Technologies in Design and Technology



Daniel Wahab

Woldingham School,
Surrey

Daniel has transformed the Design and Technology department at Woldingham School by making 3D printers the centre of the design and make process. Design and making is very thorough in a whole range of materials, but the use of 3D CAD and the printers is used at a very sophisticated level.

Students are introduced to the idea of projects right at the start of their secondary experience and there is a constant reference to quality assurance and customer satisfaction. The practical outcomes in the school workshop are treated as working prototypes and they are tested and evaluated on that basis.

Daniel's enthusiasm for digital engineering can be seen in the way in which he uses the new technology to produce first class examples of unique products. An example is a clip to hold sun shades onto a pair of glasses. Other examples include brackets for a mobile DJ unit and specially shaped pipes for electrical appliances.

Daniel has also been able to inspire his colleagues in the use of 3D printers and everyone in the department has developed an ambition to find more challenging uses for this kind of engineering. Not only that, but there are plans to make Woldingham School a digital engineering hub for local schools, so that students from across the region can have access to this technology.



Category 7

Development of STEM Learning Opportunities Award



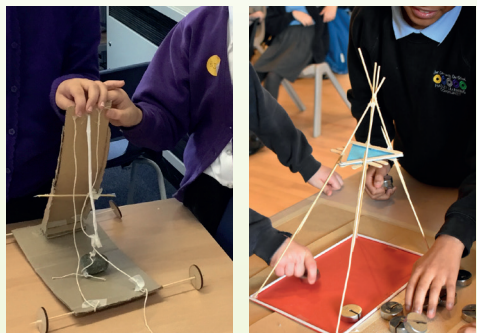
Leanne Mee

The STEM Workshop,
Shropshire

Leanne founded The STEM Workshop in 2018 as a direct result of the decline in the teaching of D&T within the community. Her vision is to allow schools to develop and sustain high quality STEM education, giving young people the confidence to connect their learning to the wider world. Leanne was a head of D&T for many years, and also became strategic leader of Maths and Science. In her role as STEM Coordinator, she gained National Professional Qualification for Senior Leadership for bringing about sustainable changes to STEM education. Leanne also supports many events as a STEM Ambassador to raise the profile of D&T and Engineering.

She gained funding from the Institute of Engineering and Technology which allowed her to work with 10 primary schools to embed three projects into their curriculum. The project called #ConnectingEngineeringwiththeCurriculum focused around connecting children to the Mechanical Engineering, Civil Engineering and Aerospace sectors but also addressed key objectives from the D&T curriculum and allowed them to contextualise their learning across Science and Maths. This was a real success and impacted 640 children and 20 staff and connected schools to ambassadors from industry including BAE Systems, Royal Air Force, RAF Museum and Network Rail.

Leanne is also an active participant of the Design and Technology Association's Subject Consultation group and has submitted an article on the STEM workshop to 'Designing.' magazine.



Category 8

Royal Academy of Engineering Award for Exceptional Pupil Achievement



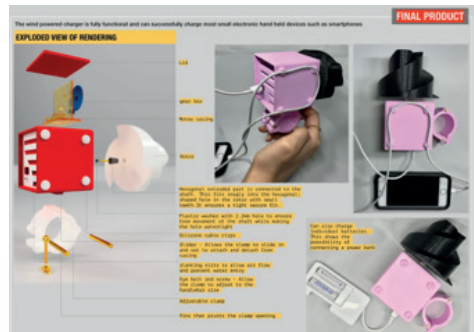
Vivika Martini

Highgate School,
London

Vivika has won an Arkwright scholarship and the TDI Challenge in 2019 and was also nominated for the Triumph Design Awards 2019 with her GCSE project – a bike mountable, wind-powered charger. Her focus has always been sustainable design. Her Y12 upcycling project was an eco-planter lamp, made from scrap aerospace parts, with added moisture tester and lights. Her Year 13 coursework focused on recycling bins with an integrated app to encourage people to recycle their waste and learn more about recycling.

Vivika has a passion for learning and is not phased with implementing new technologies into her projects. She is teaching herself coding languages and using a wide variety of micro controllers. Throughout her projects, she has researched and analysed the contexts thoroughly and demonstrated excellent design skills via both hand-drawn and 3D modelling media.

Vivika chairs the environment committee, has volunteered at Frontier in their adult sea turtle conservation, and this summer had a work placement and shadowing at Buro Happold and Aecom respectively. She has created a website to showcase her portfolio of work and writes a blog about her views on ecology. She has been selected as a school ambassador to represent the department on an upcoming educational partnership trip to Taiwan.



**Royal Academy
of Engineering**

Category 9

Design and Technology Subject Leadership Award



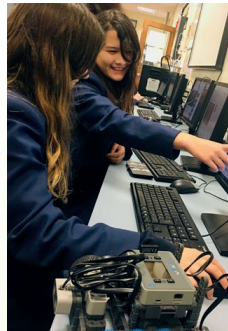
Amanda Britton

Twynham School,
Dorset

Amanda has created an energetic department that excites and inspires the students. She has increased option numbers, leading to the introduction of a new engineering course and sourced new technology to support the delivery of a well-structured curriculum. She has supported students to enter many competitions. In 2019 the school won Design Ventura with Design Cubes, a dice game that helps people generate ideas and combats creative block. These products have sold out and all money has been donated to charity.

She is an inspirational leader of her subject and a lifelong learner. She took advantage of the plethora of webinars available over the past 18 months and is an expert in leading curriculum conversations. Over the last academic year she has led a curriculum review with the authority of a senior leader and the understanding of a curriculum leader.

Amanda leads her department beyond academic success and is passionate about providing a broad range of additional opportunities for all key stages by creating links with local universities. She also supports her colleagues within the D&T community and has led CPD.



Category 9

Design and Technology Subject Leadership Award

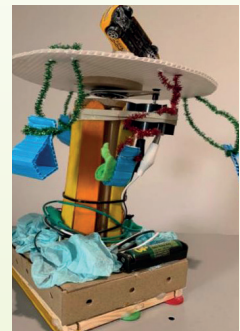
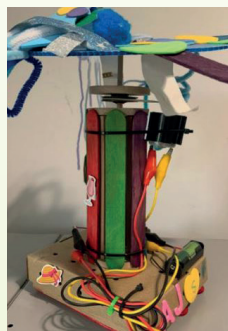
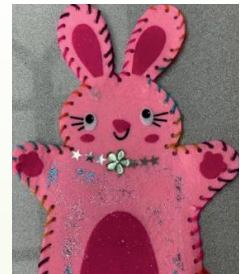
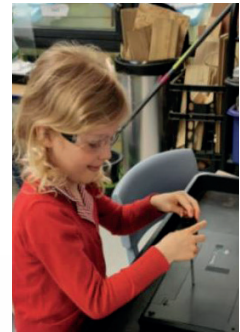
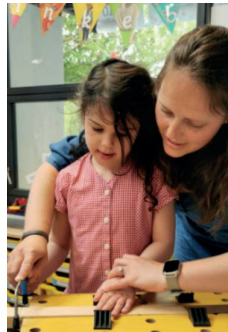


Claire Marshment

Weeke Primary School,
Hampshire

Over the past very difficult and challenging year Claire has developed D&T in an engaging, exciting and sustainable manner. She has passion and a clear vision for the subject, with compassion and understanding for her colleagues and a real understanding of the needs of her pupils, building a solid, effective and motivating curriculum.

She researched and developed the curriculum to ensure student progression and raised standards and expectations across the school. Claire has great communication skills with all stakeholders and has secured funding to purchase high quality resources. She has also delivered outstanding teacher CPD and developed her colleague's subject knowledge with her exceptional interpersonal skills, organisational skills and time management.



Category 10

Supporting Design and Technology Award

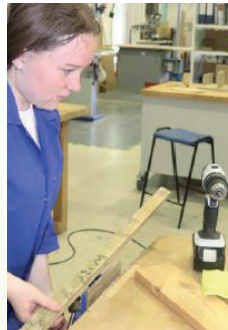


Robert Hodge

WMG Academy for Young Engineers, Warwickshire

Robert's exceptional skills, dedication and expertise have transformed the lives of countless young learners. Originally employed as a technician, he decided that only through focused volunteering work could he dedicate enough time and energy to specific engineering projects designed to help young people. He has led teams of young engineers to success in the National Green Power competition, F1 in Schools and the national UTC Royal Navy Challenge. He is now turning to space and embarking on a CANSAT mission supported by the European Space Agency.

Robert works quietly and conscientiously, and his support is appreciated by all colleagues. He is unsurpassed as an ambassador for the subject and the academy, attending open days and marketing all aspects of STEM and engineering. His dedication and passion to influence young learners' lives is a credit to the academy, and to our country's engineering heritage and future prospects. The academy has a reputation for engineering excellence, and Robert has probably had the single largest impact on its success.



Category 11

Heart Educational Award for Design and Technology Teacher Education

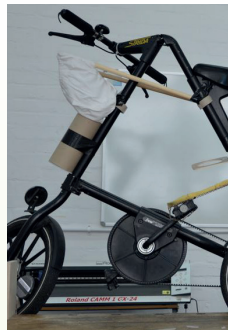


Alan Bright

Goldsmiths University
of London

Alan joined the design education team at Goldsmiths in 2003, working on the BAEd and PGCE programmes, and is now the programme leader of the whole teacher education programme. He has developed excellent relations with schools, building a team of high-quality school-based mentors. He supports and enriches the practice of the students through his observation of classroom practice and his sensitive feedback that encourages all students to improve. Alan involves the students in curriculum innovations, and has forged many external links for the programme, such as with the V&A and the Design Museum. His friendly and professional personality enables him to draw in national experts that enrich the experience of students with endless 'guest sessions', in STEM, sustainability, assessment, and emerging technologies.

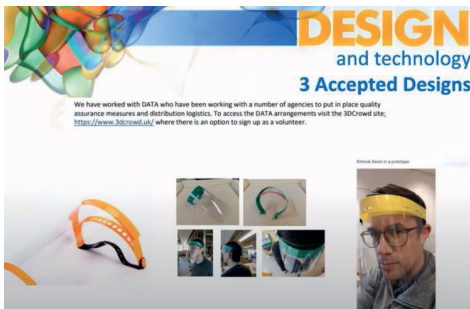
In recent years, as numbers entering D&T teaching have drastically fallen. Alan has maintained good numbers of high-quality applicants and in addition to those directly entering the PGCE programme, has also supported the development of new teachers through his work at Goldsmiths but also at UCL's Institute of Education and by working with Schools Direct and local SCITT. At Goldsmiths, Alan has become the essential heart of design and technology teacher education.



Category 13

Onshape Special Award Recognising Design and Technology's Social Impact

This is a new category created for 2021 to highlight the outstanding contribution made by teachers during the pandemic, in an exceptionally difficult year. There was a phenomenal contribution of personal protective equipment (PPE) designed and made in schools across the UK and so we have chosen ten schools, who made a significant impact, to represent D&T departments across the country.



Andrew Duffey

Merchant Taylors School,
Hertfordshire

David Clay

Priory Community School,
North Somerset

Helen Vardy

King Ecgbert School,
South Yorkshire

Kirby Dowler

John Taylor High School,
Derbyshire

Michael Noonan

Queen Elizabeth's Barnet,
Hertfordshire

Sam Booth

Bradfield School,
South Yorkshire

Shakeel Rathore

Longdean School,
Hertfordshire

Steve Newton

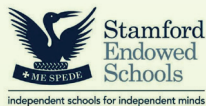
Stamford School,
Lincolnshire

Stuart Sweetman

King Henry VIII School,
West Midlands

Tim Weston

Oakham School,
Rutland





The Excellence Awards are made following a nomination and independent judging process. Each of the award categories has specific criteria which are used to select the winners who each receive a framed certificate containing a citation.