

EXCELLENCE
awards
2020



Celebrating Excellence in Design and Technology Education

Thursday 3rd December 2020

In partnership with the

IET The Institution of
Engineering and Technology

D&T the design
and technology
association



Celebrating Excellence in Design and Technology Education

Welcome



Lesley Morris

**Chair, Design and
Technology Association**

On behalf of the Design and Technology Association - welcome! This is our 20th Excellence Awards event and I'm delighted to be hosting this virtual awards ceremony.

There continue to be many excellent examples of teaching and learning in D&T and I'm very pleased 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 - 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 film tonight's event. Without all their help, this evening would not be possible. 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 will enjoy the evening.



Tony Ryan

**Chief Executive,
Design and Technology
Association**

Welcome to this year's annual awards ceremony, a rescheduled event brought online in light of the coronavirus outbreak. I am delighted that with the help of our friends and colleagues at the IET, we have been able to arrange this event. This is my third awards ceremony as CEO, and I will happily admit that this is my favourite event on the yearly calendar, even though it is in a slightly different format this year. It is an absolute privilege and a joy to be able to host a celebration of everything good that is taking place in design and technology education across the UK and beyond.

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.

I believe that it is more important than ever for the UK to develop the design, technological and entrepreneurial skills of our young people, 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 18,000.

Blueprint 1000 which you will hear us refer to several times this evening, represents a significant change of business direction for the Association as we seek 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 and confidence essential for 21st-century work and life.

As your professional Association, we continue to lobby 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. The paper that we have been working on for the last twenty-four months with our partners at the Royal Academy of Engineering and which we will release early next year will be a call to action for decision-makers with the ability to influence the future position and success of D&T within mainstream UK schools.

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 - 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 18,000 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.

Order of Virtual Ceremony



Introduction by David Lakin – Head of Education & Safeguarding at the Institution of Engineering and Technology

Introduction to the awards by Lesley Morris – Chair at The Design and Technology Association

Welcome by Tony Ryan – Chief Executive of The Design and Technology Association

Presentation of categories

Closing speech by Tony Ryan and Lesley Morris

Order of Presentation

Category 1:

Flamefast UK Ltd Award for Innovation and Creativity in Design and Technology

- Peter Williams

Category 2:

Inspirational Teaching of Design and Technology – Primary Award

- Bonnie Barton

Category 3:

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

- Simon Wood
- Philip Harvey

Category 4:

The James Dyson Foundation Award for Excellence in Engineering Education

- Matthew Lim

Category 5:

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

- Matthew James

Category 6:

The Manufacturing Technologies Association Award for Industry Engagement

- Mike Mellors

Category 7:

Award for Development of STEM Learning Opportunities

- Rose Russell

Category 8:

The Royal Academy of Engineering Award for Exceptional Pupil Achievement

- Christopher Kalogroulis

Category 9:

Design and Technology Subject Leadership Award

- Kabir Ahmed

Category 10:

Supporting Design and Technology Award

- Kerry Truman

Category 11:

Design and Technology Teacher Education Award

- Dawne Irving-Bell

Category 12:

NEJ Stevenson Outstanding Contribution to Design and Technology Award

- Tony Wheeler



Previous winners of the Outstanding Contribution to Design and Technology Education

- George Asquith
- Professor Stephanie Atkinson
- Dr David Barlex
- Paul Barraclough
- Howard Barrett
- Professor Clare Benson
- Pam Bolton
- Andy Breckon
- Tim Brotherhood
- Chris Cannon
- Bob Cater
- Paul Clewes
- Penny Creighton
- John Culpin
- Louise Davies
- Peter Dicker
- Professor John Eggleston
- Ali Farrell
- Professor Geoffrey Harrison
- Ed Gillett
- Richard Green
- Denis Hallam
- Bren Hellier
- George Hicks
- Mike Hopkinson
- Geoff Howard
- Michael Ive HMI OBE
- Sandie Kendall
- Professor Richard Kimbell
- Professor Tim Lewis
- Carol Martin
- John Mattick
- Susan McLaren
- Andy Mitchell
- Professor Eddie Norman
- Gwyneth Owen-Jackson
- Jon Parker
- Rowland Penfold
- David Perry
- Dick Powell
- David Prest
- Ian Punter
- Dr Marion Rutland
- Dr David Spendlove
- Professor Kay Stables
- Clive Seagar
- John Swain
- Tim Tarrant
- Stephanie Valentine
- Gordon Warren
- Bob Welch
- Colin Whitfield
- Jill Whittard
- Ricky Wilkinson MBE
- Ian Williams
- Ruth Wright
- Nigel Zanker

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Royal Academy
of Engineering

www.raeng.org.uk



www.flamefast.co.uk



www.nejstevenson.co.uk



www.mta.org.uk



www.hme-tech.com

Category 1:

Flamefast UK Ltd Award for Innovation and Creativity in Design and Technology



Peter Williams

Weston Favell Academy,
Northampton

Peter has been a successful head for over 10 years, turning around two failing departments, and was a D&T teacher for 17 years. He has been seconded onto the Extended Leadership Team, and is leading on the Creative Curriculum by linking Performing Arts, D&T and Art. This has received national recognition from Big Bang, SSAT and praise from Sir David Carter. He has led on implementing an innovative assessment and reporting tool across the whole academy, resulting in it becoming a Centre of Excellence.

Peter also leads a highly successful department with outstanding outcomes across all subject areas. High praise has also come from external moderators, who comment on the innovation, creativity and experimentation shown in students' work. In 2018 Year 7 students were national winners in the Ministry of Building Innovation and Education/Class of your own competition. Students have access to the very latest in CAD/CAM, with lunchtime, afterschool and weekend workshops taking place throughout the year. Peter has created a modern and inspiring learning environment, investing in a range of technologies. He provides in-house departmental training, inspires students through flipped learning and has developed the aspiration and STEM Zone, which includes an F1 racetrack, 4x4 Challenge, and a fly zone for the AirEngineers project.

Peter has also been asked to share his creative and innovative approaches on the national stage, presenting at the SSAT National Conference on delivering a Creative Curriculum; at the National Strategy Conference on leading a successful department, and at Educating Northants 2019 on using innovate technology within a school to improve outcomes.



Category 2

Inspirational Teaching of Design and Technology – Primary Award



Bonnie Barton

Hazlegrove Prep School,
Yeovil

Bonnie has taken an outdated department and campaigned for investment with the governors and head. She then spearheaded the £300,000 investment and development into the department – a huge job in a boarding school where the children are in the department throughout the day as well as the evenings and weekends.

The children at Hazlegrove are inspired and enthusiastic about Design and Technology. Bonnie has won a Textiles teaching award for inspirational teaching in the classroom. She has supported children in winning and ranking highly in the regional and national finals for the Flying Start Challenge two years in a row. She has taken a group of children to a Bryanston Competition and they won in one of the two categories.

Bonnie has written articles for the Design and Technology Association and for the Tatler good school guide. She has entered and won places for children to make micro-sculptures from polymer clay and sent them into space on a NASA water-rocket, the miles travelled were certified. She orchestrated a week-long STEM festival of activities with an engineer visiting. A helicopter visited the school and the children went to a military airbase and talked to engineers from different areas. A D&T scholarship has also been awarded to a 12-year-old student at Hazlegrove.



Category 3

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



Simon Wood

Kellett School, Hong Kong

Simon joined Kellett School as Head of D&T in 2015 with excellent knowledge and technical abilities. Since then the GCSE and A Level results have improved significantly, due to his infectious enthusiasm, ability to inspire, challenge, stretch and support the students.

At GCSE students have produced well finished, functioning products and portfolios way beyond the requirements of the course. Students with SEN are included, pushed and supported, overcoming their barriers to learning. The ECA program at Kellett which is always heavily oversubscribed, involves students from Year 7-10. Projects include the first Greenpower team in Southeast Asia, leather wallets, producing games for the school fair, house competitions and most recently we have a 1962 Vespa which the students are restoring.

Always in pursuit of personal development and excellence, Simon had the idea to create a small collection of iconic products. The 'Simon Wood Design Museum', as school staff affectionately refer to it, is an amazing space which regularly gets students' jaws dropping.

Simon is well respected in the Hong Kong design community and has arranged a seminar for students from Thomas Heatherwick and has been approached by the Chamber of Commerce to write an article on Future Learning in D&T. In the past year he has visited Stuart Douglas to develop his copic marker skills, Paul Woodward to brush up on his already impressive CAD skills and Brian Smith from ICSAT to attend an electronics and control course. Simon Wood is a truly inspirational teacher, having a positive impact on anyone he works with.



Category 3

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



Philip Harvey

Queen Elizabeth's School
Faversham, Kent

Philip is an inspirational leader; his commitment to his subject and his impact on the whole school have been exceptional for many years. Phil has ensured that the school's Design and Technology and Art faculty is ground-breaking. He has inspired generations of students, several of whom have gone on to be highly successful in the world of design.

The faculty has had success in competitions, winning the 2019 Young Furniture Maker's Award, Rotary Innovation Design Contest and the 2019 John Downton Trophy Design competition. In 2019 his F1 in Schools team became World Champions at the finals in Abu Dhabi.

Phil has forged links with local and national companies, has a wealth of industry contacts and works with them to enhance students' experiences. Phil has trained and supported Art teachers and students to utilise the equipment in D&T to enhance their projects, including welding and CAD/CAM, which has led to excellent and original outcomes. He has also worked closely with the Science faculty, and as a result the faculty was short-listed for a Times Educational Supplement STEM Award in 2019.

Phil's expertise is recognised by other schools and he has helped in an advisory capacity to develop their D&T curriculum and identify areas for improvement. He has mentored a PGCE or SDS student teacher every year for the last five years. Phil is the epitome of an inspiring teacher who changes the lives and life chances of his students through the access he provides to cutting edge experiences.



Category 4

The James Dyson Foundation Award for Excellence in Engineering Education



Matthew Lim

Cheltenham Ladies' College,
Gloucestershire

Matthew is Digital Strategy Lead and Head of Engineering, Enterprise and Technology (EET), founding the department in 2015 with the goal to give students a positive experience of engineering through project-based learning. The ethos of EET is the emphasis on the 'journey' rather than the 'destination' giving students the opportunity to develop resilience through failure which has reinvigorated them with joy of academic adventure.

Matthew's love for learning is inspirational and exemplary. His department consistently achieves excellent results and he has founded numerous clubs. The school has achieved seven Arkwright Engineering scholarships, a Kroto Prize (International prize for science communication), three Newnham College Engineering Essay Prizes, two inventions showcased at the Big Bang Fair and numerous other prizes at regional and national competitions.

Matthew's depth and breadth of subject knowledge and experience in industry and academia have been inextricably worked into the EET curriculum and cocurricular program. This gives students a true picture and a taste of the breadth of expertise, scope for innovation and business acumen required as an engineer. He has shared the evolution, design and ethos with local schools, prep school Heads, and several dignitaries including a Nobel Prize winner.

EET is more than a subject or a club, it is a philosophy; one that values inquiry and independent academic exploration framed around simple hands-on projects, taught with genuine heart. Matthew's vision and passion are infectious and volunteers for his clubs come from both the school and from local industry.



Category 5

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



Matthew James

Lewis Girls School, Cardiff

Matt has transformed D&T in school through developing projects that have required him to constantly learn and research new things and which have inspired other members of the department. His use of technology has led to a transformation in the school's approach to learning and teaching with content that has been developed and delivered using digital resources. He runs robotics, engineering and enterprise clubs and has forged links with science, has headed the creative faculty and as a Learning Network School for the Educational Advisory Service is part of the Welsh Government Women in STEM Education subgroup.

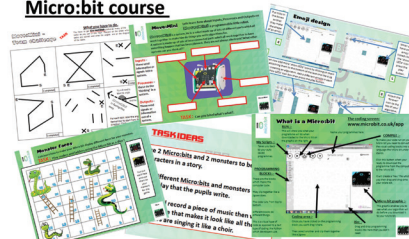
He is passionate about the use of technology and runs insets, shares ideas/best practice and resources with colleagues and teachers from other schools. His forward-thinking approach has been fundamental in the development of the IDiscover learning team at the school, developing cross curricular projects that link D&T, Science, Food Technology, ICT, Textiles and STEM.

Matt has successfully gained a grant to develop a cross school cluster project called 'Cracking the Code', working with primary schools to create a project and series of activities that make use of a programmable robot to inspire younger children and train their teachers in coding. He has been developing links with local business to help in the construction and funding of an outside STEM education area. While building links between media classes and businesses he has created a loaning option for schools without their own coding equipment. The department has a yearly RaceWars event where teams of primary children visit the school and design, build and race remote control cars against each other.

Some pupils work



Micro:bit course



Resources have been designed to connect the DCF and LNF together as well as bringing elements of Design Technology into a series of tasks and games for pupils. They are given to everyone that comes on the Micro:bit course.

Cross Curricular projects



and then in the newly branded Digital Design programming a computer game using the characters designed in DT utilizing Scratch software. As well as Kittensbots

Category 6

The Manufacturing Technologies Association Award for Industry Engagement



Mike Mellors

The Fernwood School, Nottinghamshire

Mike joined the school as an NQT and has worked tirelessly to tie up the disconnect between the school environment and industrial workplace. Mike forged strong links with industry whilst studying at university and working collaboratively with them had a huge impact on his educational journey. He has never stopped wanting children to experience the same, where this real-world connection can switch on young minds and make amazing careers a reality.

Mike's primary vehicle for industry engagement has been the annual 'Design Day' which has been running for six years. He brings 12 companies across the design, engineering, food, and graphics arena into school for the day, each setting a real-world brief for students. Students have been involved in a wide variety of projects, working with Pavegen on electricity generating pavements, Dyson on a 'blowing or sucking device', designing gear sticks for Jaguar Land Rover, a display stand for JCB, rocket cars for Bloodhound, crumple zones for McLaren, storage racking and vinyl wraps for Triumph, engine mounts for Rolls Royce, and food creations from all over the world! The companies also run master classes for A level and GCSE groups.

Although Design Day is the primary vehicle for industrial links, Mike works hard to connect other learning to real-world scenarios and industry professionals. Through Mike's work students at The Fernwood School genuinely understand what the design industry looks and feels like, so it is no surprise how the numbers for GCSE and A-Level continue to rise year on year.



Category 7

Award for Development of STEM Learning Opportunities



Rose Russell
The Ursuline Academy,
Ilford

Rose has been an outstanding Technician/ Instructor/ STEM Coordinator at the Ursuline Academy, Ilford for 28 years in both the Art and Design and Technology departments. Her work promoting STEM has been exceptional. She is a strong believer in teamwork and cross-curricular education. Departments have enthusiastically taken up her invitation to work together. PE, Maths, and Science have collaborated successfully which has culminated in the school achieving a Silver Crest award and winning prizes from the Grow Wild project, National Science and Engineering Competition and The Big Bang finals.

Trained in fashion, Rose is neither an engineer nor a scientist, but in the last decade her enthusiasm for engineering developed into an ongoing dedication to encourage young women to consider STEM careers. Rose has been deeply involved in extra-curricular activities, starting a STEM club, and is determined to make a difference, tackling the UK Engineering skills gap challenges.

In the last two years, Rose took a step back from entering national competitions and instead focused on creating more STEM engagements and visits. She continues to help students achieve summer work experiences which otherwise they would not be exposed to.

Rose is an excellent role model who has exceeded her role in many aspects. She has had a huge influence on both her students' participation in STEM activities and the links with unique career opportunities. STEM has achieved fantastic success for the students at the Ursuline. Now considering retirement, her legacy for the school is to remain a centre for excellence for STEM /STEAM.



Category 8

The Royal Academy of Engineering Award for Exceptional Pupil Achievement



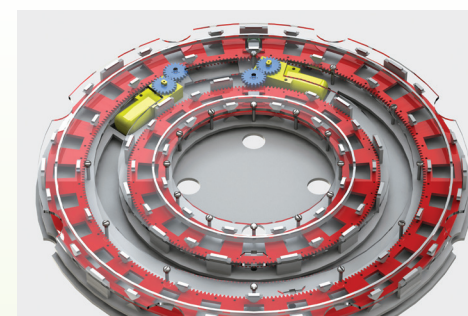
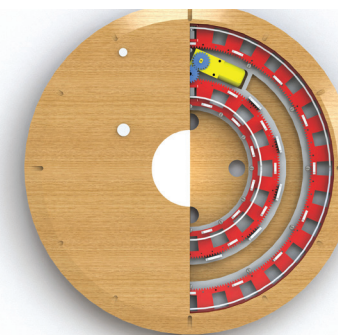
Christopher Kalogroulis
Sutton Grammar School,
Sutton

Chris is an exceptional Product Design and Engineering student who is now at the Dyson School of Design Engineering.

In Year 9 Chris was given a brief to design a jewellery box for the pewter cast piece of jewellery he had made. He designed Stackamals, a range of products using stacked layers of plywood to make a 3D product using a laser cutter. In 2016 he won the Young Intermediate Engineer of the Year Award at the Big Bang Science and Engineering Fair and later that year won the MTA's TDI Challenge Competition. Following this he was invited to talk in school assemblies and open evenings becoming a young ambassador for D&T and STEM.

Chris is an Arkwright Scholar and used the funding for his A2 project to develop his product range and to raise funds to manufacture his Stackamals range. He independently created a crowd funding page, his own website and promotional video. On the first day of the Kickstarter launch he had raised £2,000, thirty days later had raised over £8,000. He used half of the money to purchase his own laser cutter in order to manufacture and package his Stackamals products himself!

Throughout all of Chris's extra-curricular achievements, he has successfully gained a string of A*s and A/9s/8s GCSE grades. He did equally well in his A Levels, gaining 3 A*s in Product Design, Maths and Physics and a grade A in Further Maths. He has helped put D&T on the map at Sutton Grammar School and raised the profile of the subject in the process.



Category 9

Design and Technology Subject Leadership Award



Kabir Ahmed

The Derby High School,
Bury

Taking up any new position mid-year is always daunting, especially if the department you are taking on is not only outdated, but the worst performing across the whole school. The department lacked vision and was stuck in the era of 'woodwork' and 'CDT'. All projects and design ideas were made from wood and D&T was seen as a low-ability, non-academic subject. Kabir successfully negotiated a refund for unused materials and sold unused dust extractors to take the department out of the red and into the black. He budgeted each project to the last penny and thoroughly costed all activities to ensure an over spend should not occur again.

Kabir raised numbers of those opting for D&T at GCSE by promoting its value to both a traditional and alternative curriculum by highlighting the career pathways. He successfully demonstrated that creativity and problem solving were vital key life skills that employers are looking for. The department now has two GCSE groups in Year 10 and students across all abilities.

Kabir not only has impacted the D&T department, he has influenced Art and Design, Science and Maths and the wider school, through ensuring the curriculum meets real-world needs and helps students gain cultural capital and life skills beyond the classroom. Departments have implemented a feedback policy, as well as different homework policies and activities. He is currently setting up a D&T Heads of Department Forum as a support group to share good practice and ideas.



Category 10

Supporting Design and Technology Award



Kerry Truman

Nottingham Trent
University, Nottingham

Kerry is a long-term supporter of D&T having spent his whole career at Nottingham Trent University, mainly as a technician supporting the work of students across the University Faculty of Art and Design. Kerry is highly qualified, with a BEng (Hons) PGCHE Senior Fellow HEA.

As a technician, as well as supporting students to realise their creative ideas, he has many ideas of his own, several of which have now entered the sphere of practice in school D&T departments. Perhaps the most notable is the use of concrete as a constructional material. Until recently very few schools experimented with its use, beyond casting products such as external furniture at A Level. Kerry developed ways of using it for much smaller projects, utilising a range of moulds to fabricate products including lighting.

Kerry has been actively involved with running courses for teachers and sharing his ideas with them. These have proved very popular and he has run workshops at the D&T Association Summer Schools and encouraged teachers to explore materials they may not have considered. As a consequence there are many teachers, and more importantly students, working in materials incorporating different approaches than there would otherwise have been.

Aside from his university work and supporting school departments he has a big following on Twitter and has inspired teachers with fresh ideas for materials and concepts.



Category 11

Design and Technology Teacher Education Award



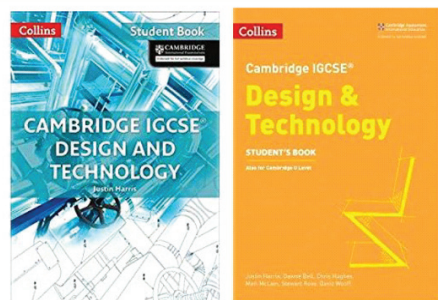
Dawne Irving-Bell

Edge Hill University,
Ormskirk

Dawne's consistently strong and skilful leadership has a proven track record of excellence within D&T Initial Teacher Education. She has designed and delivered high-quality school-led, and University-based education programmes that help teachers at different stages of their careers to develop their subject and pedagogical knowledge, skills and understanding.

In her own school-based practice Dawne established a Young Engineers Club, and students received several national accolades and won numerous competitions. She was asked by the LEA to transform D&T in failing schools, including securing a department's removal from HMI special measures. Dawne was regularly invited to sit on ITE Quality Assurance panels, delivered lectures to student teachers and was appointed as an Associate Lecturer at Edge Hill University. There she was quickly promoted to the role of Creative Applied Technologies subject co-ordinator, with strategic overview of all Art, Design and Technology provision at the University. She went on to facilitate the design and delivery of several innovative D&T teacher education programmes, working across all age phases and material areas. One she established was the 'flexible' PGCE, a ground-breaking programme designed to enable those with an aptitude for teaching who were unable to undertake a 'traditional' teacher education programme.

Dawne has always been active in championing design and technology and is absolutely committed to ensuring the provision of high-quality CPD. Her enthusiasm is contagious; her passion and tireless commitment help ensure that design and technology remains on the curriculum.



The North West D&T Festival
Primary School Teacher day - 24 June 2009
Secondary School Teacher day - 25 June 2009
Taking place at Edge Hill University (Ormskirk Campus)

FREE EVENT
Book now to avoid disappointment!

National and Regional D&T and Science, Technology, Engineering, and Maths (STEM) organisations have joined forces to present the North West D&T Festival which will be hosted by Edge Hill University, Ormskirk Campus.

Category 12

NEJ Stevenson Outstanding Contribution to Design and Technology Award



N.E.J. STEVENSON
DESIGNERS & MAKERS OF FINE FURNITURE



Tony Wheeler

Professor at Goldsmiths
University

Tony has been a D&T teacher, designer, Head of Design and Faculty Head. At Goldsmiths he became a senior research fellow, focusing on digital design tools, exploring three-dimensional space and integrated media in early expressions of multimedia story telling.

In 1991 he set up TAG learning with Jim Patterson and made the 'Mapper' series of topic based, desktop wiki software for primary schools, provided a starting point for children to add their own layers of thoughts, ideas and personal data. Further multimedia development work led to 'Portfolio Builder', a system that encouraged children to organise, present and explain their best ideas on the classroom computer so others could contribute and enjoy them.

As well as topic-based wikis, multimedia story systems and creative portfolios, in 1999 Tony helped to conceive, set up and launch 'TAGteacherNet' a co-operative version of Facebook for teachers, and in 2000 'Showcase', a version of Flickr for every school in the country. TAG Learning was becoming increasingly commercial and Tony left to return to a research role at Goldsmiths to work creatively with young people and teachers. At TERU he convinced the DfE, QCA and exam boards to support a project (e-scape) to explore how dynamic digital portfolio tools might work in the context of GCSE D&T assessment, winning two international e-assessment awards in 2017 for 'best use of formative assessment' and 'innovation of the year'.

Tony describes his interests thus: "I've basically been a big kid excited by the fantastic possibilities afforded by design and technology and delighted with the opportunity to share and explore these along with young people."



BODY MAPPER

interactive topic based I.T.

explore
read
write
measure
draw
graph

my height

TAG developments Ltd.

XEMPLAR EDUCATION
JUNIOR TOOLBOX

pupil
teacher
admin

m@ds



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.