

Science Summer School NI Programme 2024





“Nothing in life is to be feared; it is only to be understood.”

- Marie Curie, Physicist, Chemist and the first female Nobel Prize Winner.



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A Welcome from the Mayor of Mid and East Antrim Borough Council

On behalf of Mid and East Antrim Borough Council, I am delighted to welcome you to our second Science Summer School NI event.

Science Summer School NI's 'Activate Your Curiosity: Making Sense of Science', aims to encourage curiosity, inspire the next generation of local talent and future workforce and raise the importance of Science, Technology, Engineering, Arts and Maths (STEAM) activities with young people and their parents. This initiative was established in 2012 at St. Paul's Way Trust School in East London by Lord Andrew Mawson OBE and Professor Brian Cox CBE, OBE, FRS, and the project is now expanding nationally with the aim to 'make the UK the best place to do science'.

We are delighted to welcome both Lord Mawson and Professor Cox to The Braid for this year's event.

The opportunities for exciting and innovative careers in STEAM subjects are almost limitless. Bringing the event to Northern Ireland for the second time, we present an inspirational programme, which mixes the best of STEAM subjects through a series of TED style presentations, discussions and hands-on experiments.

Science Summer School is a catalyst for a collaborative vision for the borough to nurture future talent. Through partnerships with schools and businesses across the borough, the initiative has expanded to include a full year of inspirational and insightful engagement opportunities. This includes competitions that stimulate innovation and creativity and school visits to companies in the borough which showcase career opportunities to help create a pipeline of future talent for

our employers. You can read more about these activities on pages 18-20 in the programme.

I hope that you will greet Professor Cox and our guest speakers and workshop providers with enthusiasm and make a positive contribution to the various sessions. This is an exciting opportunity to expand your STEAM knowledge and gain an appreciation of the importance that STEAM subjects contribute to all aspects of our lives.

Gerardine Mulvenna

Alderman Gerardine Mulvenna
Mayor of Mid & East Antrim Borough Council

Timetable

Tuesday 23 January,
The Braid Civic Centre,
Ballymena

9am	Registration in the main foyer.
9.45am	Welcome and introduction in the Main Auditorium by The Mayor of Mid and East Antrim Borough Council, Alderman Gerardine Mulvenna and Lord Andrew Mawson OBE.
2.15pm	Key Note Address: Professor Brian Cox CBE, OBE, FRS
3pm	Event Close

- Explore Nursing and Midwifery: Professions For All
Queens University Belfast
 - Science in the Cinema
Nerve Centre
 - Discover Your Future in Engineering
Royal Academy of Engineering in Partnership with NIACE and NCC
- The Art of Air: Investigating Cement Renders through Touch and Feel
Kilwaughter Minerals Ltd
 - The Terumo Brownie Factory
Terumo Blood & Cell Technology
 - Portable Planetarium: Making Sense of Space
Armagh Observatory and Planetarium
 - Quality in a Manufacturing Environment
IPC Mouldings Team
- The Brush Monster Challenge
Ulster University
 - Building Sustainability
Wright Bus
 - Clue-Pho: A Workshop of Clues and Photonics!
Yelo Team
 - Deep Racer
Amazon Web Services
 - Electric Power At Your Fingertips
Caterpillar



“Each one of you can change the world, for you are made of star stuff, and you are connected to the universe.”

- Vera Rubin, astrophysicist, discovered dark matter.
Image: Carnegie Institution

One Giant Leap:
Activate Your Curiosity

Evening Reception, Main Auditorium
Hosted by Professor Brian Cox CBE, OBE, FRS

Free evening event for Years 12-14 students and their parents.

5pm	Career Fair
6pm	Welcome and Introductions
6.15pm	Discussion and Meet the Speakers
7.30pm	Close

Group 1

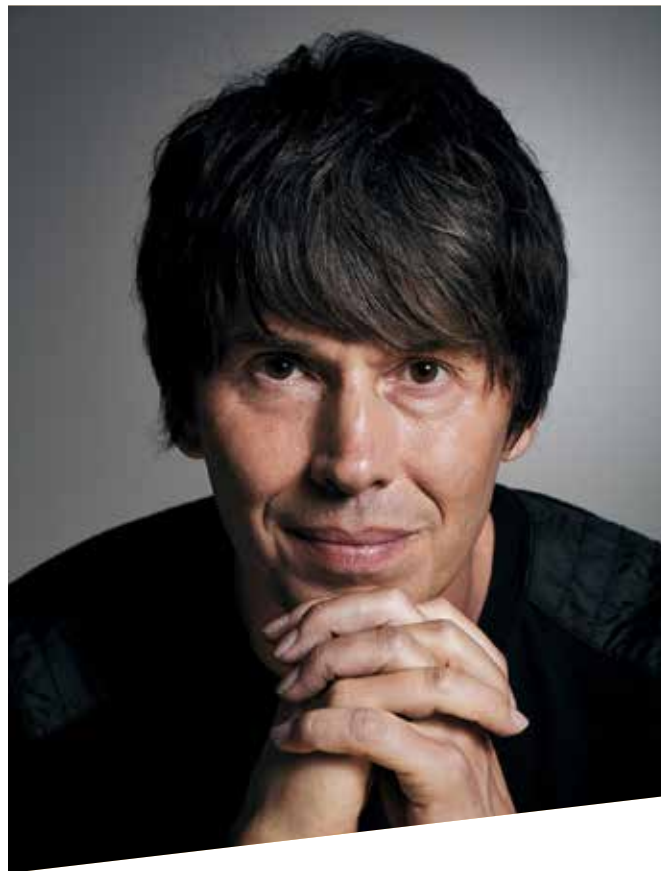
10am	Practical Workshops Session 1, see pages 15 - 17
10.50am	10 Minute Break and Change Over
Presentations, Session 2: Main Auditorium	
11.00am - 11.18am	Dr. Andrew McIntosh
11.22am - 11.40am	Dr. Erin Higgins
11.40am - 11.50am	Audience Q&A with speakers
12pm	Practical Workshop Session 3, see pages 15 - 17
12.50pm - 1.20pm	Lunch
Presentations, Session 4: Main Auditorium	
1.20pm - 1.38pm	Richard Furey
1.42pm - 2pm	Ryobi Team
2pm - 2.10pm	Audience Q&A with speakers
2.15pm	Groups 1 & 2 meet in the main auditorium for the event close. Key Note Address: Professor Brian Cox CBE, OBE, FRS
3pm	Event Closes and Students Depart

Group 2

Presentations, Session 1: Main Auditorium	
10am - 10.18am	Vince Rosales
10.22am - 10.40am	Dr. Simon Doherty
10.40am - 10.50am	Audience Q&A with speakers
11am	Practical Workshop Session 2, see pages 15 - 17
11.50am	10 Minute Break and Change Over
Presentations, Session 3: Main Auditorium	
12pm - 12.18pm	David Surplus
12.22pm - 12.40pm	Fiona Simpson & Suzanne Leslie
12.40pm - 12.50pm	Audience Q&A with speakers
12.50pm - 1.20pm	Lunch
1.20pm	Practical Workshops Session 4, see pages 15 - 17
2.15pm	Groups 1 & 2 meet in the main auditorium for the event close. Key Note Address: Professor Brian Cox CBE, OBE, FRS
3pm	Event Closes and Students Depart

A message from Professor Brian Cox CBE, OBE, FRS

Co-Founder, Science Summer School and Professor
of Particle Physics at The University of Manchester



Brian began his career in the music industry as keyboard player with rock band Dare and later with chart-toppers D:Ream. In 1995 he obtained a first class honours degree in physics from the University of Manchester and in 1998 a PhD in High Energy Particle Physics at the DESY laboratory in Hamburg. Brian is now Professor of Particle Physics at the University of Manchester, The Royal Society Professor for Public Engagement in Science and a Fellow of the Royal Society.

Brian is widely recognised as the foremost communicator for all things scientific, having presented a number of highly acclaimed science programmes for the BBC including 'The Universe' (2021), 'The Planets' (2018), 'Forces of Nature' (2016), 'Human Universe' (2014), 'Wonders of Life' (2012), 'Wonders of the Universe' (2011) and 'Wonders of the Solar System' (2010). He also co-hosted popular astronomy and cosmology series 'Stargazing Live' with Dara Ó Briain (and for ABC

in Australia, with Julia Zemiro) and award-winning BBC Radio 4 series 'Infinite Monkey Cage' with Robin Ince, which has gone on to become one of the UK's most popular podcasts. His BBC Horizon documentaries include, 'Can We Make a Star on Earth?', 'What Time is It?' and 'What on Earth is Wrong with Gravity?'. In December 2016, Brian put on a sparkly jacket to star in a musical Christmas special entitled 'The Entire Universe' alongside Eric Idle, Noel Fielding, Hannah Waddingham, Arlene Phillips and Warwick Davis.

As an author, Brian has also sold over a million books worldwide including 'Black Holes', 'Universal: A Guide to the Cosmos', 'Quantum Universe' and 'Why Does $E=mc^2$?' with co-author Professor Jeffrey Forshaw. He also wrote the series of books to accompany his popular television and radio programmes.

Brian has undertaken several sell-out live arena tours, setting several world records, including for the biggest selling science tour – a record he himself broke with his most recent worldwide tour, 'Horizons', which took in venues in the UK, USA,

Australia, New Zealand, Singapore, Hong Kong and across Europe. Brian will bring 'Horizons' to 4 regional theatres in Northern Ireland in January 2024.

He is credited with boosting the popularity of subjects such as astronomy and physics and has garnered a host of accolades for his TV work, including two Royal Television Society awards and a Peabody Award for Wonders of the Solar System.

In 2012 Brian co-founded Science Summer School with Lord Andrew Mawson OBE to help 'make the UK the best place to do science and engineering' with annual projects now running in London, South Yorkshire, Surrey and Northern Ireland. Brian is a Patron of St Paul's Way Trust School in Tower Hamlets, East London where Science Summer School started.

www.manchester.ac.uk
www.joneggingtrust.org.uk

A message from Lord Andrew Mawson OBE

Co-Founder, Science Summer School
and Chairman, Well North Enterprises



Welcome to the second Science Summer School NI inspiring young people to shape their future job and career choices in science and engineering.

I am delighted that my Science Summer School Co-Founder, Professor Brian Cox CBE OBE FRS, is able to join us in person this year and see how his vision “to make the UK the best place to do science and engineering” continues to grow in Northern Ireland.

We started Science Summer School in 2012 at St Paul’s Way Trust School in East London. What had been a failing secondary school in the middle of two very challenging housing estates was transformed over several years.

This process was driven by developing a local Innovation Platform with like-minded colleagues from education, health, business and public sectors to focus on place-making in a very practical way.

As these partnerships developed we gained invaluable experience through working together and Learning by Doing, an approach we encourage all young people to follow as well. A new school was built with inspirational leadership putting STEAM subjects at the heart of the curriculum. Local people sent their children to the school, exam results improved dramatically and students started to go to Russell Group Universities and take up Degree Apprenticeships.

After more than a decade of practical experience, Well North Enterprises has started to develop Science Summer School programmes in other areas around the UK. We have set up Innovation Platforms in South Yorkshire and Surrey as well as continuing to work with Mid and East Antrim Borough Council here in Northern Ireland. We are launching a new programme in Derby later this year.

Today is an exciting day for the 400 students, their teachers and the many businesses taking part as we see the core messages identified above continue to evolve.

Science Summer School NI could not happen without the vision and support of a forward-thinking group of companies generously supporting this year’s event. Our grateful thanks to: Headline Sponsor: Kilwaughter Minerals; Company Sponsors: IPC Mouldings, Terumo, Ryobi, Michelin, Yelo and Caterpillar; Programme Sponsors: GES Group, Ballymena, Wright Bus, Ballymena and Phoenix Energy.

Also to Rhonda Lynn and Christine Barnhill with their fantastic team at Mid and East Antrim Borough Council; Graham Whitehouse MBE who leads Mid and East Antrim’s Manufacturing Task Force; and Ross Hickey with his team at The Braid Civic Centre, Ballymena.

I would like to thank Professor Cox for his tireless support and encouragement for Science Summer School which he manages to combine with an incredible array of filming, touring and writing commitments.

Have a great day at The Braid.

www.andrewmawsonpartnerships.com



**WELLNORTH
ENTERPRISES**

Guest Speaker Biographies

Presentation Session 1



Vince Rosales
QUB Midwifery Graduate
Queens University Belfast.
TED Talk Title: Nursing and Midwifery, Professions for All

Vince Rosales is originally from the Philippines but has lived in NI since 2004. He completed his education via an Access Course at Belfast Met, followed by a Degree in Nursing at Queens University and then in Midwifery in 2019. He has worked in Nursing Homes, Emergency Rooms and Delivery Suites and has continued his professional development throughout his career, undertaking special courses in Critical Care in Children and in Dementia Care and now works as a male midwife.



Dr. Simon Doherty
Senior Lecturer, School of Biological Sciences
Queens University Belfast
TED Talk Title: Wonky Donkey: An Atypical Career in Veterinary Medicine

Based at the Institute of Global Food Security, Queen's University Belfast, Simon is a veterinarian with interests in livestock health & welfare, One Health & sustainability, and international trade & investment in the animal health & veterinary sectors.

Prior to his presidency of the British Veterinary Association in 2018-19, he was Animal Health & Aquaculture Sector Specialist for the Department for International Trade and has experience in veterinary practice, industry, academia and professional representation. Simon was a Founding Director of Vet Sustain and was recently appointed to the FVE Veterinary Public Health & Sustainability Working Group.

Presentation Session 3



Mr. Richard Furey
Managing Director, Yelo Ltd
TED Talk Title: Photonics – The magic that makes the world work

Richard is Managing Director of Yelo Ltd. a company he founded 40 years ago. Specialising in automated test, Yelo provides test solutions for much of the Photonics industry. Richard has a degree in Electronics from Southampton University and is a fellow of the IET (FIET). Within Yelo he is responsible for strategic direction as well as being principle product architect.

Outside of Yelo he has had a number of roles ranging from being a Member of the Business Advisory committee to OFTEL to being a member of the Industrial Advisory Board for the UU school of engineering. As a member of the IET Richard is currently chair of the Technical Network Communities Committee with responsibility for the IETs 24 specialist Technical Committees.

Presentation Session 2



Dr. Andrew McIntosh
Head of Research and Development with Kilwaughter Minerals Ltd.
TED Talk Title: Making Grey, Green

Dr. Andrew McIntosh is Head of Research and Development with Kilwaughter Minerals Ltd., leading a multi-disciplinary team designing and developing external wall coatings and insulation systems.

Dr. McIntosh's PhD thesis focused on the development of new, low-carbon cements based on Northern Irish clays. His publications centre around the development and application of these materials as alternatives to ordinary Portland cement. Having initially studied biochemistry and with over 25 year's experience working in cement, concrete and mortar industries, Andrew is passionate about sharing the excitement of the chemistry of cement and encouraging others to the little-known world of cementitious materials science.



Dr. Erin Higgins
Astrophysicist at the Armagh Observatory and Planetarium
TED Talk Title: Black holes making ripples in space-time

Erin is an astrophysicist working at the Armagh Observatory & Planetarium, researching the lives and deaths of the most massive stars in the Universe.

She works as a Postdoctoral researcher at the Armagh Observatory focusing on black holes and the most massive stars. Erin collaborates with astronomers across the world within the BRIDGCE network, which aims to understand how elements necessary for our daily lives are formed in the cores of stars.



Fiona Simpson, Head of Commercial NI and Suzanne Leslie, Principal Partner Sales Manager
Amazon Web Services
TED Talk Title: You don't know, what you don't know, until you know!

Fiona Simpson is at the forefront of shaping the future of technology, specialising in Cloud & Information Technologies. With over 25 years' experience in the IT industry. Fiona leads commercial teams in bridging the gaps between business strategy and cutting-edge technology, resulting in breakthrough cloud solutions that propel organisations forward. Fiona frequently shares insights at conferences and industry events, inspiring others to embrace opportunities presented by the digital age.



Suzanne has been leading the Partner Sales strategy at AWS (Amazon Web Services) for the last three years. Before diving into the tech world, she spent 20 years in telecoms, including three at Vodafone Americas gaining experience navigating global markets. For Suzanne, sales is more than just closing deals – it's building connections, understanding needs, and coming up with smart solutions. She's all about sharing tips and tricks she's picked up along the way, especially in the fascinating world of the cloud!

Presentation Session 4:



David Surplus, OBE
Managing Director
B9 Energy Storage
TED Talk Title: The role of DAC
in production of Scalable Zero
Emission Bunker Fuels

David is a Chartered Engineer from the marine and offshore oil and gas industry. He worked for 10 years with Lloyd's Register including secondment to UK Department of Energy where he was involved in the hook-up and commissioning of four oil and gas platforms in the North Sea: Shell, Kittiwake, Total North Alwyn B and BP South East Forties.

He is the Co-founder of B9 Energy group of companies and has worked on the development of 10 onshore wind farm sites, two offshore wind sites, industrial scale AD and now Energy Storage.

Having a varied career, David is now happy to be back in the gas industry sector once again focusing on decarbonisation.

Fun Fact!

All our guest speakers have been given 18 minute slots for their presentations.

Why 18 minutes? It's long enough to be serious and short enough to hold people's attention. It's a format adopted by the online TED Lectures and helps ensure that speakers convey their key points in an informative and interesting way.



Daniel Kraska, Engineering Supervisor and Ciaran Maxwell, Low Carbon and Renewable Energy Engineer
Ryobi
TED Talk Title: How to Engineer Your Future: Navigating Diverse Career Paths in Engineering

Daniel is an Engineering Supervisor and has a background in CNC machining, robotic systems and automation cells for the automotive industry.

Ciaran is a Low Carbon and Renewable Energy Engineer who has graduated through the Ryobi Apprenticeship Scheme.

Practical Workshops

Explore Nursing and Midwifery – Professions for All

Dr Maria Healy,
Queens University Belfast

Join clinical staff from Queen's University Belfast in this interactive workshop which aims to inspire you to become the next generation of Nurses and Midwives.

Stereotypical preconceptions on gender appropriate professions are often set from an early school age; this workshop will dispel gender stereotypes and debunk the myths and misconceptions - whether you're male, female or non-binary, Nursing and Midwifery is for everyone and might just be for you!

During the workshops, you will get up close and hands-on with practical activities and experiences such as:

- Taking blood pressure
- Recording pulse
- Recording temperature
- Listening to the fetal heart rate on a simulator

Furthermore, our Nursing and Midwifery Ambassadors will share their unique insight into their professions, which give you:

- A social and civic purpose – the chance to make difference to people's lives.
- High graduate employment – 94% of graduate nurses find employment in a nursing job within six months of finishing their studies.
- The opportunity to travel and work anywhere in the world.
- Career diversification and development opportunities such as teaching, research and team leadership.



Science in the Cinema

Barry Brennan, Nerve Centre

This workshop will explore the world of Special Effects in the world of Cinema - which has been around for much longer than you think...

From the earliest days of Cinema film makers have used various tricks, tools, techniques and Science, to fool audiences willing to believe what they see.

From the early pioneers of Cinema through to the Virtual Production techniques used by Studios today Special Effects have always used the latest science & technology to make the impossible seem possible on screen.

This workshop will take pupils behind the scenes of both the history of Film Production using Special Effects and reveal the creative approaches used today to design both practical SFX Make up & Digital Visual Effects.

We promise you explosions, Zombies ...and a clapping Monkey!

The workshop will also highlight current opportunities for young people to develop their interest in, and perhaps begin a pathway into, the Creative Industries - through our Screen Academies.

Discover Your Future in Engineering

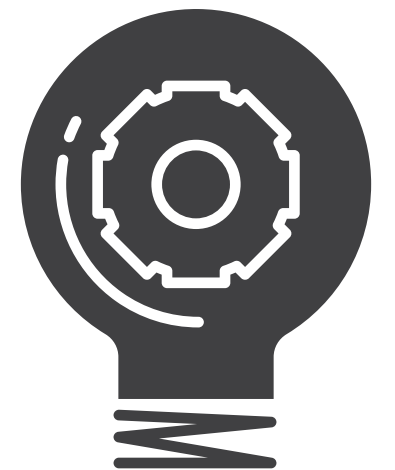
Gillian Gregg, Bronagh Ward ,
Daniel Lowe & Patrick Porter, The
Royal Academy of Engineering in
Partnership with NIACE and NCC

Explore how you can shape the world of the future through exploring how engineers in Northern Ireland are making a difference in the world today.

Whether you love sport or space, fitness or fashion, construction or computing, engineers are at the heart of it.

You will have the opportunity to take part in a series of fun and exciting interactive activities and challenges that explore what engineering is and how you can be a part of it.

Create a fibre optics encrypted message or design a smart watch that will track and monitor your health; Or think sustainably and use the properties of water and soap to design and build soap-powered boats and for those of you who get lost in the experience why not make a floating compass.



The Art of Air: Investigating Cement Renders through Touch and Feel

Dr. Alice Moffett-Culkin & Benjamin Martin, Gillian Hamilton, Joanalie Baart and Elaine Davison, Kilwaughter Minerals Ltd.

Join us for an immersive workshop delving into the captivating world of cement-based renders! This hands-on experience offers an opportunity for students to explore the tactile nuances of renders by manipulating air content in cement-based mixtures. Participants will produce and compare render samples, discovering how differing air compositions affect the feel and properties of the final product.

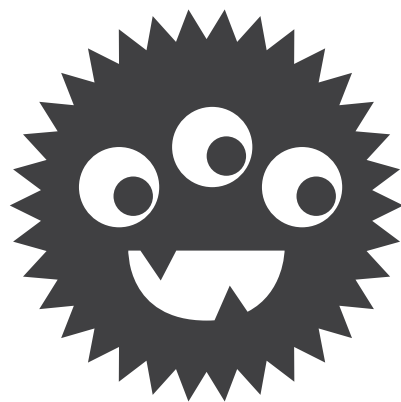
Additionally, participants will further expand their creativity by constructing personalized crafts using rapid-setting concrete. This hands-on session will allow them to explore both the properties of cementitious renders and the swift setting properties of concrete.

The Terumo Brownie Factory Terumo Blood and Cell Technologies Team

Students will be introduced to Industrial Engineering through a hands-on Lean Manufacturing simulation and meet a variety of Terumo associates from their Larne and Denver teams including representatives from engineering, research and development, quality, commercial, human resources, production and legal. Concepts the students will learn about include: batch processing versus single piece flow, improving throughput due to improved quality, and reducing non-value-added tasks. The students will have to work together to improve a chaotic manual assembly process into an efficient manufacturing line using industrial engineering.

Portable Planetarium - Making Sense of Space Rok Nezic, Armagh Observatory and Planetarium

During this session students will go on a live interactive tour of the Solar System and beyond within our portable planetarium. Students will get the chance to choose where they journey to in Space and there will be plenty of opportunity to ask our experts questions.



The Brush Monster Challenge Professor Margaret Morgan, Ulster University

During this workshop pupils are given the opportunity to build a 'Brush Caterpillar' using everyday items such as: a dustpan brush, a motor, crocodile leads, batteries and an eraser. The pupils will be asked to assemble the parts using these items to make the 'Brush Caterpillar' move as the motor shaft turns. They will learn about circuits and how the motor turns using batteries and wires.

Pupils can modify the brush, depending on the distance from the centre line the eraser is mounted. They will also explore what happens if they swap the crocodile clips and test it on different surfaces.

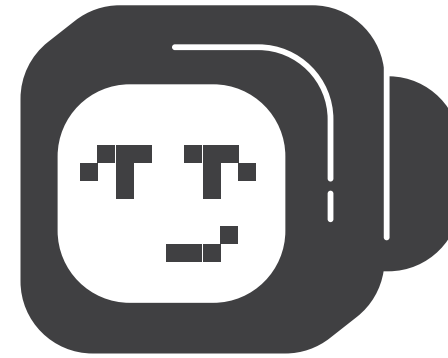
Quality in a Manufacturing Environment IPC Mouldings Team

Implementing a quality management system affects every aspect of an organisation's performance. Benefits of a documented quality management system include: Meeting the organisation's requirements, which ensures compliance with regulations and provision of products and services in the most cost- and resource-efficient manner, creating room for expansion, growth, and profit. Meeting the customer's requirements, which helps to instill confidence in the organisation, in turn leading to more customers, more sales, and more repeat business.

Are you ready to have some fun and learn something new? In this workshop, you will get to experience the power of quality management by making your own products! You will see how having a clear process, a set of standards, and a way to check your work can help you create amazing things. Quality management is not only useful for businesses, but also for your everyday life. It can help you improve your skills, solve problems, and achieve your goals. Join us and discover how quality management can make a difference!

Building Stability Wright Bus Team

The Wright Bus Team will explain how lightweight materials can be used to create a solid frame for the coaches with students invited to participate in a competition to create a structure, with materials and tools.



Clue-Pho: A Workshop of Clues and Photonics! Yelo Team

Embark on the exciting journey to the realm of light and technology in this immersive workshop. Participants will delve into the captivating world of photonics, gaining insights into how this cutting-edge science impacts on our daily lives. Through hands on activities, participants will witness firsthand the science of photons and their applications.

The workshop kicks off with an exciting challenge – participants will be tasked with solving a photonic-related laser puzzle, igniting their problem-solving skills and curiosity.

Guiding the students is the Yelo Engineering Team, experts in the field of photonics. Their knowledge will support and empower students to explore light, experiment with building circuits, engaging in simple coding and acquiring other exciting skills that showcase the interdisciplinary nature of photonics. This workshop will also highlight the importance of teamwork and collaboration! Students will work as an engineering team, tackling challenges that match those faced in real-world projects.

Join Yelo and unleash your creativity, challenge your intellect and discover the endless possibilities that await in the fascinating universe of light and technology – Photonics!

Deep Racer Danny Buttle, David Carson & Peter Trimble, Amazon Web Services

Our AWS team of Solutions Architects will set you up for success, compete against your fellow students where you will learn, practice and compete to apply machine learning (ML) skills in an autonomous race for a chance to win prizes.

Electric Power at Your Fingertips

Andrew Black, Keith Chambers, Chris Gault, Marc Maybin, Mark Young, Joanne Moore
Caterpillar

Discover the electrifying world of power generation as you learn about the fundamentals of electricity and explore real world applications. Participants will build and test their own mini electrical generator system in an interactive practical workshop.

The workshop will include other hands-on demonstrations of scaled electricity production and use. Participants will also learn how the world is changing and how different forms of electric power generation will become integral to the industrial sites of the future.



“Curiosity is the surest sign of intelligence”

- Oliver Jeffers, Northern Irish artist and storyteller.

Competitions

Science Summer School aims to inspire young people to become the next generation of scientists and engineers with an inspirational programme throughout the year, that mixes the best of STEAM (Science, Technology, Engineering, Arts and Maths) through a series of seminars, discussions and hands-on experiments.

The Science Summer School is not a stand-alone event but is a catalyst for a collaborative vision for the borough to nurture future talent. Mid and East Antrim Borough Council endeavor to encourage inspirational thinking of pupils in the borough through exciting competitions and school engagement opportunities with leading employers in the area.

Sustainable Futures Competition

Pupils in Years 8-10 were asked to showcase a sustainable future for all by creating a space that will incorporate a number of sustainable and carbon emission reduction technologies, demonstrating their understanding of climate change, sustainability and ‘clean tech’ opportunities available.

We asked pupils to use materials from around the home and school to create this bespoke 3D design which could take the shape of a cross section of a sustainable home or a model of a new sustainable recreation area. The possibilities were endless and the entries did not disappoint.

The winner and their class will be invited to visit Ecos Sustainability Hub to find out more about renewable energy technology, reedbed filtration systems, as well as sustainable food management and biodiversity.

Winning entry from Mr. McClintock's Year 8 Technology Class, Dunclug College.



Cosmic Classroom Competition

In an exciting competition, pupils across the Borough in Key Stage 1 & 2 were asked to show us what they knew about climate change by illustrating a superpower that could help protect our planet!

Two lucky winners have won a Cosmic Classroom session for their class, hosted by Armagh Observatory and Planetarium. Through this exciting prize, students will learn how to navigate the night sky and travel to their favourite planets all from the comfort of the classroom.

Winning entries from Luna Marks, Buick Memorial Primary School and Holly Beckett from Eden Primary School.


HORIZONS: A 21st Century Space Odyssey

Students in Year 10 were offered an exciting opportunity to win a pair of tickets to see HORIZONS: A 21st Century Space Odyssey, with Professor Brian Cox CBE, OBE, FRS at Belfast Waterfront Theatre on Wednesday 24 January 2024.

We sought talented secondary school students, with a real interest and desire to make a career in Science, Technology, Engineering, Arts and Mathematics be it ‘space-related’ or in another STEAM-connected industry, and asked them to tell us about their career aspirations, their motivations and what change they hope to make in the future.

Winners of this exciting competition will be announced during the event!

Activate Your Curiosity!



HORIZONS : A 21st Century Space Odyssey

Mid and East Antrim Borough Council are offering students in Years 11 - 14 an exciting opportunity to win a pair of tickets to see HORIZONS : A 21st Century Space Odyssey, with Professor Brian Cox CBE, at Belfast Waterfront Theatre on Wednesday 24th January 2024!

Having set two Guinness World Records with his previous sell-out World Tour, Professor Brian Cox is back in regional theatres to see off the sell-out Arena tour HORIZONS.

What can I win?

Two lucky winners will each win a pair of tickets to see HORIZONS : A 21st Century Space Odyssey, with Professor Brian Cox CBE, at Belfast Waterfront Theatre on Wednesday 24 January 2024.

Winners will also be invited to meet the Mayor in a special celebratory event.

Success occurs when opportunity meets preparation - Zig Ziglar

What do I need to do?

We are seeking talented secondary school students in Years 11-14, with a real interest and desire to make a career in Science, Technology, Engineering, Arts and Mathematics be it ‘space-related’ or in another STEAM-connected industry.

We want to hear about your career aspirations, what is motivating you, driving you and why. What change do you hope to make in the future? If you had one legacy goal, what would it be? It does not have to be space related but should connect with STEAM in some way. Answers should be no more than 800 words. Students can include images in their answers. Answers can be emailed or posted in and MUST include :

Student Name	Year
School	Teacher Name
Teacher Contact Details (e-mail & telephone)	



**Getting practical
at Kilwaughter
Minerals**



**Manufacturing Task
Force (MTF) Event**

School Engagement Activities

Over the past year a number of schools have had the opportunity to learn about local firm and Headline Sponsor, Kilwaughter Minerals which produces high quality products for the construction and agriculture sectors.

The company recently completed a major capital investment for additional warehousing and a blending plant facility to assist the company to meet the increasing demand for products across Ireland and Great Britain.

During the visit, the students had the opportunity to learn more about what makes a major manufacturing company work, the tour of the manufacturing plant included an insight into product development, R&D, business development, quality assessment and quarrying.

Interested in engagement opportunities?

For further details contact:
amplify@midandeantrim.gov.uk



The Manufacturing Task Force (MTF)

The Manufacturing Task Force (MTF) is an industry-led initiative, which supports and stimulates the Mid and East Antrim Borough Council area's manufacturing, engineering sector and agri-food sector.

Over fifty companies and stakeholders are actively involved in a range of initiatives to support business growth including engagement with schools to not only secure a pipeline of essential skills for future career opportunities but to ensure students are fully aware of the wide expanse of career opportunities available in a sector which is not only growing and developing but also one that is becoming more technologically driven and focused on green energy resources.

It is through this first-hand experience and interaction that students are being made aware of key roles and opportunities available including engineering, research and development, sales, marketing, human resources, quality control, production, technology and AI and more recently opportunities around green energy and cleantech.

The current pilot Hydrogen Training Academy project supported by the MTF which is providing Level 2 to Level 7 qualifications in basic hydrogen was an industry first in NI and helping to develop future career paths in hydrogen.

To discover more visit:
www.investmea.com



**Mid & East Antrim
Manufacturing
Task Force**



LMP Upskilling Academy:
Counterbalance &
Forklift Training



Pupils visit Clarke,
Ballymena

Labour Market Partnership

Mid and East Antrim Labour Market Partnership (LMP) was established in March 2022, to ensure that citizens of the borough can all be supported to reach their full potential. Working in partnership with employers and stakeholders, the LMP supports those seeking employment, provides upskilling support for better employment, improves access to the labour market for those with disabilities and promotes skills pathways for all ages.

The work of the partnership is funded by the Department for Communities as part of Employability NI. Employability NI (ENI) was established by the Department for Communities to design, procure and implement a fresh suite of employability provisions/initiatives to support people into meaningful employment.

MEA Labour Market Partnership consists of a range of representatives from Department for Communities (JBO), Northern Regional College, Galgorm Resort and Spa, Northern Health and Social Care Trust, Gallaher Trust, CITB, Northern Ireland Union of Supported Employment, MEA Inter-ethnic Forum, MEA Manufacturing Taskforce, Local Enterprise Agencies and Education Authority.

LMP has delivered a wide range of sector-specific employment academies in Transport, Forklift, Engineering, Manufacturing, Hospitality, Health Support Services, Administration, Classroom Assistant, Tourism and Childminding as well as bespoke programmes for women returners and those with disabilities. The LMP is proud to support Science Summer School NI and the wide range of inspiring employer/education engagements over the last year. The Science Summer School project has strengthened the relationships between schools, employers, parents and stakeholders to support our young people to take advantage of the fantastic career opportunities available to them.



NI Apprenticeship Week 2024

Northern Ireland Apprenticeship Week 2024 takes place between 5-9 February, and offers a series of in-person and virtual events, showcasing the benefits of becoming an apprentice.

As part of NIAW24, Mid and East Antrim Borough Council has collaborated with a number of schools and organisations in the Borough to provide a dedicated week of events and promotional activities that will demonstrate how apprenticeships work for individuals, businesses, communities and the wider economy.

Mid and East Antrim Borough Council is committed to supporting local businesses, offering a pipeline of talent and employees to the businesses and providing career pathways to the young people in our Borough. Through collaboration with local employers and schools we hope to ensure that our businesses have the support they need to introduce new talent to their workforces and provide pathways for our young people to gain the skills and experience to build the foundations for their career pathway.

To find out more about events taking place near you contact:
amplify@midandeantrim.gov.uk



Event Sponsors



Kilwaughter Minerals: Headline Sponsor of Science Summer School NI 2024

Kilwaughter has a strong company vision to set standards for innovation, quality and customer experience in our industries. This is achieved through our teams living our company values which come from a rich heritage of a family-owned company, created around the quarry in Northern Ireland. Our sustainable growth has been driven and developed to incorporate two manufacturing operations over 75 acres and 4 distribution centres. These operational facilities deliver market leading and high-quality products throughout the UK and Ireland for our three brands operating within the construction and agricultural industries; K Rend, K Systems, Kilwaughter Lime and K Landscapes. We work with our customers to develop long-term partnerships and are determined to bring positive contributions to all of our communities and our teams – our aim is to add value to peoples lives and delight our customers.



Ryobi

Ryobi Aluminium Casting UK Ltd. was founded in 1990 in Carrickfergus and produces aluminium components using the high pressure die casting process for the automotive industry. Current customers include Volkswagen, Stellantis, Ford, Jaguar Land Rover and Magna.



IPC Mouldings

An award-winning manufacturer and provider of injection-moulded parts and engineered assemblies, IPC Mouldings works closely with the global leader in aircraft interiors. Next time you are flying, from economy through to super first class, it's very probable that the seat you're sitting on includes parts manufactured by the company. IPC Mouldings is dedicated to the education of NI's future engineers and offers a number of exciting opportunities for students.



Terumo Blood and Cell Technologies

Terumo Blood and Cell Technologies, a global leader in blood component and cellular technologies, is the only company with a unique combination of apheresis collections, manual and automated whole blood processing, and pathogen reduction coupled with leading technologies in therapeutic apheresis and cell processing. The company currently operates from two locations in Larne.



Michelin Development

Michelin is the world's largest tyre company with continual innovation driving growth. Michelin Development Ltd was set up by Michelin to help establish long term economic stability around the areas where it's sites are, or were, located. Michelin Development Ltd continue to support the local community in Mid and East Antrim, both socially through participation in local initiatives, and through financial support for business growth.



Yelo

Founded in 1983, Yelo is a leading automatic test equipment (ATE) manufacturer, specialising in the conception, construction, and support of tailored test engineering solutions. Located in Carrickfergus, our state-of-the-art 25,000 square foot factory facilitates seamless vertical integration, offering comprehensive in-house design and manufacturing capabilities. We pride ourselves on delivering cutting-edge solutions across various industries, such as Photonics, Defence, Medical and Automotive.

Yelo globally exports its purpose-built systems to destinations such as the USA, Europe, and the Far East. Supported by a dedicated team of professionals, Yelo has played a pivotal role in ensuring the reliability of the internet networks we all use every day, with their test systems playing a crucial role in the internet's seamless operation. Breakdowns or failures are rare occurrences due to Yelo's contributions in this domain.

If you require an automated test solution for your product, Yelo will only be too happy to speak to you on your requirements.



Caterpillar

Caterpillar Inc. operates two sites in Northern Ireland. The facility located in Larne is home to the Electric Power business where the team designs and manufactures Cat® Power Solutions for key business sectors including data centres, construction, mining, healthcare, utility and other industries.

The Springvale facility, Belfast, produces major component subassemblies including axles and transmissions for Cat articulated trucks as well as other oil and gas applications.

Find out more at: www.caterpillar.com



Programme Sponsors



GES Group
GES Group, an award winning Electrical and Mechanical Engineering company, with over 100 employees are Programme Sponsors of Science Summer School NI 2024! GES Group is an essential element in maintaining and strengthening the backbone of the power generation, industrial, manufacturing and agriculture of Ireland, the UK and Beyond.

At the GES Group, we are more than an engineering company. Our team is dedicated to shaping the future through innovation, sustainability and partnership.



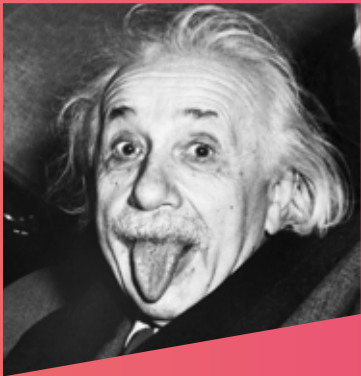
Wright Bus
Year after year, since 1946, Wrightbus has contributed a tremendous amount of technology and innovative products to help grow and improve the global transportation industry. Our goal is to leave a legacy that will inspire the next generation to move towards a better, sustainable tomorrow.



Phoenix Energy
Phoenix Energy was established in 1996 and introduced the benefits of natural gas to Northern Ireland, offering fuel choice to domestic and business energy users.

Today, the company owns and operates the largest natural gas distribution network locally, providing gas availability to over 360,000 properties, with over 250,000 customers connected to the network.

Phoenix is actively working with industry partners to deliver renewable gas solutions such as biomethane and hydrogen. These green gases can be delivered through our existing infrastructure, meaning current users will be able to continue enjoying all the flexibility of gas with minimum disruption.



“The truth of a theory is in your mind, not in your eyes.”

- Albert Einstein, Theoretical Physicist, Nobel Prize winner, devised the theory of relativity.

Special Thanks

Mid and East Antrim Borough Council would like to thank our sponsors Kilwaughter Minerals Ltd., IPC Mouldings, Ryobi, Terumo, Yelo, Caterpillar, Michelin Development, GES Group, Wright Bus and Phoenix Energy.

In addition Mid and East Antrim Borough Council would like to extend thanks to Well North Enterprises and all of our guest presenters and workshop providers.

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