

Director's Foreword

We are delighted to present to you the full public programme for the fifth NI Science Festival, an annual celebration of science, technology, engineering, arts and mathematics. Thanks to the generous and continued support of our Principle Funders & Partners, we've been able to deliver our largest selection of events to date; championing great pioneers both locally and internationally, and expand our horizons to include more of Northern Ireland than ever before.

During the day, the Festival offers a range of workshops, talks and interactive activities for young people and parents. In the evening, we will present a mix of scientific debate, talks, theatres, comedy, music and film for adults.

The Festival Team

Festival Director: Chris McCreery

Festival Programme Manager: Jillian Thompsor

Marketing Manager: Andrew Moore Regional Manager: Susan Heaney

North West Programme Manager: Rachel McDermott / Sharon Tosh

Events & Marketing Officer: Méabh Rooney

-inance Officer: Mairead Kane

Intern: Claire Hill

Communications & PR: Gillian Grattan & Orry Robinson (J Comms

Website: Steven Henry|kingsteven.com

General Enquiries

NI Science Festiva

3rd floor, Botanic House, 1-5 Botanic Avenue, Belfast BT7 1JC



Booking information

Most of our events are open to the public. Suitability, admission and booking information are indicated in the listings. Ticketing links for events can be found via the festival website. Please bring a printed copy of your ticket along to the event.

Concession rates apply to those aged 16 and under, over 65s, students, the unemployed, disabled persons and their personal assistants unless otherwise stated. Proof of status may be required

The Festival Board

Bill Connor (Chair), Claire Burgoyne, Tony Byrne, Liz Conlon,
Alan Fitzsimmons, Judith Harvey, Sarah Jones, Frances Morton,
Jonathan Wallace, Victoria Simms.

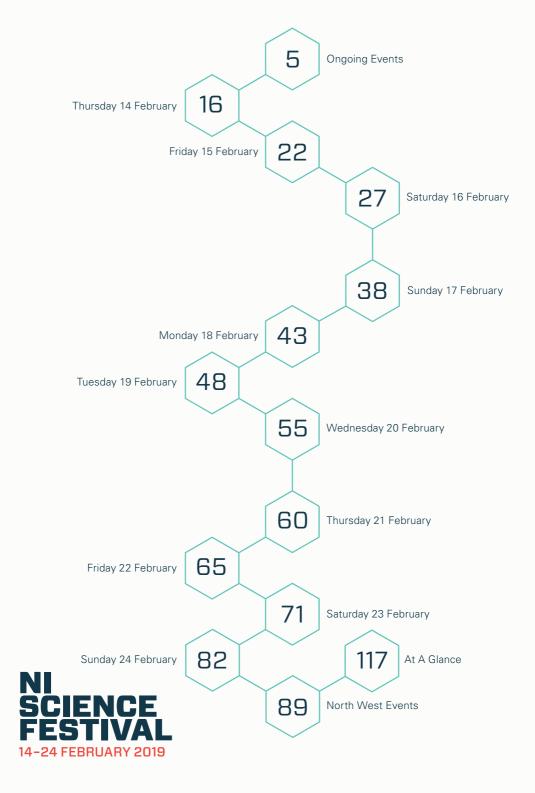
Disabled Access

All partnering venues aim to be as accessible as possible however a small number have restricted access. Should you or your group require information or assistance please contact info@nisciencefestival.com. Venue Information is also available through the Access400 online service at adaptni.org

Programme Changes

Please note that all events are subject to change. Be sure to check our website or social media forums for the most up to

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SCIENCE COMMUNICATION

NI Science **Festival Roadshow**

Saturday 16 - Tuesday 19 February

10.00am - 1.00pm & 2.00 - 5.00pm

SRC Newry (16), SWC Enniskillen (17), The Junction Dungannon (18), Cataylst Inc Ballymena (19)

All Ages

£3 / £10 Family (2 adults, 2 children). Book via nisciencefestival.com

NI Science Festival Roadshow, our all encompassing family-friendly event celebrating the science of you, the universe and everything in between is returning for its third year across the region! Bringing a range of activities, experiments and shows, we encourage you to come along and experience the wonders of science!

Featuring all this & more!

- A Celestial Journey (3D show)
 - Disease Detectives
- Dinosaur Disaster show with Scientific Sue
- Lego technic workshops
- ClayRazy workshops
- AFBI research
- Investigate SAFEWATER with Ulster University
- Play virtual golf with ChemGolf
- Handle lizards, spiders and owls with EcoMantella
- VR space experience with Boomclap Studios







Beers & Careers

DATE Various dates	тіме(s) 7.00 – 8.30pm	
VENUE Ormeau Baths Gallery, Ormeau Avenue, Belfast BT7 1AQ		SUITABILITY 18+
ADMISSION & BOOKING Free. Book via nisciencefestival.	com	

Beers & Careers is a series of informal meet-ups for anyone interested in developing careers in a range of STEM focussed areas, which we'll be delving into on different nights over craft beer and some nibbles. If you're one of the following:

- Recent graduate in a STEM subject,
- An undergraduate who's looking at the careers market.
- Considering changing from a non-STEM discipline and interested in hearing from excellent companies in a range of sectors
- Or just anyone else who's interested

Then the Beers and Careers events are for you! Each night, we'll have a different focus, with a different blend of companies looking for different skill sets: Fintech & Cyber Security (Thurs 14 Feb), IT (Mon 18 Feb). Life & Health Sciences (Tues 19 Feb), Advanced Engineering & Clean Tech (Wed 20 Feb) and Creative & Digital (Thurs 21 Feb)

Some of the city's top employers will be there to talk very briefly about opportunities, what they're looking for in people, and why these companies are going to be the backbone of the Belfast economy, but in a laid back and fun environment. We'll supply the beer and snacks, you bring yourself. Don't worry about shirts and ties, don't worry about CVs, just bring questions!







Leonardo 500

Thursday 14 – Sunday 24 February		10.00am – 5.00pm (Closed Mondays)	
VENUE Ulster Museum, Botanic Ct, Belfast BT9 5AB		SUITABILITY All Ages	
ADMISSION & BOOKING Free. Drop In Event			

To mark the 500th anniversary of the death of Leonardo da Vinci, 12 of the Renaissance master's drawings from the Royal Collection will go on display at the Ulster Museum, as part of 12 simultaneous exhibitions across the UK. Twelve drawings, selected to reflect the full range of Leonardo's interests – painting, sculpture, architecture, music, anatomy, engineering, cartography, geology and botany – will be shown as part of this celebration of the original Renaissance Man.

NATIONAL Milseling N SPACE

Gaia

Thursday 14 – Sunday 24 February	10.00	am – 5.00pm
venue W5, 2 Queen's Quay, Belfast, BT3 9QQ		SUITABILITY All Ages
ADMISSION & BOOKING Free with admission to W5		

Gaia is an amazing touring artwork by UK artist Luke Jerram.

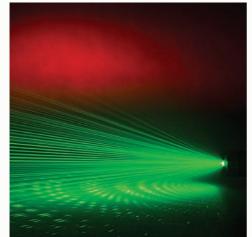
Measuring seven metres in diameter, Gaia features 120dpi detailed NASA imagery of the Earth's surface.

The artwork is 1.8 million times smaller than the real Earth with each centimetre of the internally lit sculpture describing 18km of the Earth's surface. A specially made surround sound composition by BAFTA award winning Composer Dan Jones is played alongside the sculpture. In Greek Mythology Gaia is the personification of the Earth.

This will be a unique opportunity, for young and old, to experience the Earth close up in an exquisite, three-dimensional way.









MATHS & PHYSICS

Lasers Live

Thursday 14 - Sunday 24 February	TIME(S) 10.00am – 5.00pm (Closed Mondays)	
VENUE Ulster Museum, Botanic Ct, Belfast BT9 5AB		SUITABILITY All Ages
ADMISSION & BOOKING Free. Drop In Event		

Come and learn from experts from the Centre for Plasma Physics and Astrophysics Research Centre at Queen's University Belfast about how scientists use laser technology to learn more about our solar system and the wider universe. Lasers Live will demonstrate how we can use lasers to measure the distance to the moon, map out asteroids and even detect phenomena as exotic as gravitational waves.

This exhibition is a unique opportunity for adults and children alike to discover how research by physicists at Queen's is playing a leading role in developing our understanding of the universe.



TECH & DIGITAL

The Great QR Hunt

DATE Thursday 14 – Thursday 21 February	
venue Various locations across Belfast	suitability All Ages
ADMISSION & BOOKING Visit nisciencefestival.com for more	details

Returning to the Festival for its second year is The Great QR Hunt! Open to all, the aim of the game is simple. Hidden across several Festival venues are a number of QR codes. When a code is scanned, using a phone or tablet, players will receive a hint and a clue.

Encouraging computational thinking: following instructions (algorithms), breaking tasks down (decomposition), deciphering what matters (abstraction) and using logic, once all QR codes are collected, the final riddle will revealed!





Set the Controls for the Heart of the Sun

Thursday 14 - Saturday 23 February

12.00 - 5.00pm (Closed Sunday & Monday)

ArtisAnn Gallery, 70 Bloomfield Avenue, Belfast, BT5 5AE

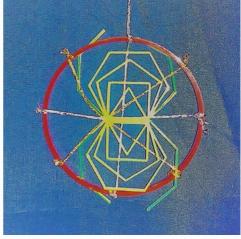
All Ages

Free. Drop In Event

We shall be heading straight into the sun for an astounding journey from the gallery into space during February. Set the Controls for the Heart of the Sun will feature artworks inspired by and made by the power of the sun. These are being exhibited alongside a solar astronomy model generously lent by the Mullard Space Science Laboratory.



ArtisAnn



ART & SCIENCE

Free. Drop In Event

Emanations from Z An Exhibition of New Artworks by Colin Reid

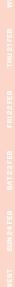
Thursday 14 - Saturday 23 12.00 - 5.00pm (Closed Sunday & February Monday) ArtisAnn Gallery, 70 Bloomfield All Ages Avenue, Belfast, BT5 5AE

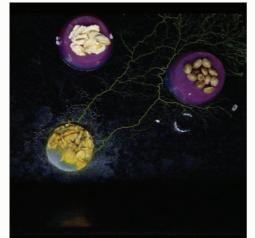
The pieces in this exhibition are derived from the geometries of mathematics, in particular from an abstract space called the zeta landscape which is at the heart of number theory. The central object of the zeta landscape is the harmonic series, the series of intervals from which musical pitches are derived. The works, both physical and sonic. represent the end of an aesthetic exploration into number theory from the perspective of a musician.

Colin Reid is a composer and musician. He travels extensively performing his own music and played alongside Bert Jansch and Eddi Reader also composing and performing for an adaptation of Flann O'Brien's The Third Policeman which featured Stephen Rea.



ArtisAnn







Free. Drop In Event

Vibrant Matter

DATE Thursday 14 – Sunday 24 February	TIME(S) 1.00 – 5.00pm Opening Recepti February, 6.00 –	
VENUE St Joseph's Churc Princes Dock St, E		suitability All Ages

Vibrant Matter is a group exhibition presenting new and existing works by Jasmin Märker, Jennifer Mehigan, and Jan Uprichard, organised in collaboration with Household and Sailortown Regeneration. 'Vibrant Matter' explores interhuman and cross-species interactions and how they can question and activate physical space.

Set in the historical St. Joseph's church, the exhibition offers a timely reflection on developments in the Sailortown area and will include collaboration with the local community.

Through video, print and bio-art, the works in the exhibition propose holistic, alternative and non human-centric ways to navigate the 'worlds' in and around us.

SPACE

Rocket Launch Workshops at Armagh Planetarium

Thursday 14 – Sunday 24 February		ıs Times d Sunday)
VENUE Armagh Planetarium, College Hill, Armagh, Co. Armagh, BT61 9DB		SUITABILITY All Ages
ADMISSION & BOOKING Free with admission into Armagh	n Planet	arium

Make your very own rocket in this out of this world workshop from the Armagh Planetarium. Design the nosecone and place a mission badge on the wings. Put H2O as the fuel into the rocket and blast it off! How far will it go?





Subject to Change

2019 Artist In Residence

DATE Thursday 14 – Sunday 24 February	TIME(S) 11.00am – 4.00pm (Closed Mondays)	
venue The Naughton Gallery, Queer University, Lanyon Building, Belfast BT7 1NN	ı's	suitability All Ages
admission & воокіль Free. Drop In Event		

New York-based collaborative artists Loney Abrams and Johnny Stanish's exhibition, Deviant Hybrids, looks at how hybrid bodies—chimeras, monsters, cyborgs, avatars—can be useful metaphors for The Other in society, and can help us imagine the breakdown of barriers between binaries like us/them, self/other, human/nonhuman, sex/gender, natural/artificial.

The artists will exhibit new sculptural works that materialise video game avatars, contextualised within both scientific and feminist/critical discourse.











NATURAL WORLD

Forest School

DATE Sat 16, Sun 17, Tues 19, Thurs 21, Fri 22, Sat 23 & Sun 24 February	TIME(S) 10.00am 1.00pm & 3.00pm (Times may vary per day)	
VENUE Jungle NI, 60 Desertmartin Road, Moneymore, BT45 7RB		SUITABILITY 3 – 14 Yrs
ADMISSION & BOOKING £5. Book via nisciencefestival.com		

Forest School is a unique natural classroom experience. The outdoor environment is an amazing classroom. Children learn best when challenged and interested; their self-esteem grows and they interact better with others. At the Jungle Forest School, the highly trained and skilled Forest School Leaders will work with children to allow them to explore the outdoors with appropriate support; giving children the time and space to develop a deep connection with nature.

During the session participants will be getting hands-on experiences in a safe environment e.g. using tools, building dens, lighting fires, craft activities (making natural paints), tree climbing and much more.

SPORTS SCIENCE

Find a Sports Star

Tuesday 19 – Thursday 21	TIME(S)	
February	Various Times	
VENUE		SUITABILITY
Belfast City Leisure Centres		6 – 16 Yrs
ADMISSION & BOOKING Free. Book via belfastcity.gov.uk/findasportsstar		

Find a Sports Star is a talent search initiative supporting governing body sports in affording quality training opportunities to new talent in a host of sports. The initiative is supported by GLL and Sports Institute NI (SINI) and is open to young people aged 6 - 16 across a variety of sports at various locations citywide in February 2019.

Coaches and fitness experts from SINI will be on hand during the sporting sessions to test participant's physical and physiological response across a selection of sports and guidance will be given to assist the young person in going forward and achieving targets within their selected sport. See Belfast City Council's webpage for full information on the programme and how to register for free: belfastcity.gov.uk/findasportsstar







SPACE

Soyuz Capsule Exhibition

DATE Wednesday 20 – Sunday 24 February	тіме(s) 10.00am – 4.00pm	
VENUE Ulster Folk and Transport Museum, 153 Bangor Rd, Holywood BT18 0EU		SUITABILITY All Ages
ADMISSION & BOOKING Free with admission into the Transport Museum		

On 15 December 2015, British astronaut Tim Peake embarked on the Principia mission to the International Space Station, where he spent six months orbiting Earth—conducting experiments, walking in space, and even running a marathon.

On 18 June 2016, Tim returned to Earth in the Soyuz TMA-19M descent module. Now, thanks to the Science Museum Group's partnership with Samsung, this historic piece of engineering is touring the UK and will arrive at the Ulster Transport Museum on 20 February. Visitors will be able to view the capsule for free and also take part in other paid-for activities such as VR Descent experience, science demonstrations and trails.

NATIONAL Museums Ni





STEM Storytime

Various Libraries Across NI

4 - 8 Yrs & Parents/ Guardians

Free. No booking required.

Join a STEM ambassador for a story time event in the library during the NI Science Festival. Children will be treated to a selection of stories to discover science in a fun way! The books chosen will spark excitement, teach something new and make STEM accessible to children.

Saturday 16 February

Portadown Library, BT62 3LQ - 11.00am - Dr Alan Thompson (Senior Analyst, Almac)

Larne Library, BT40 1SQ - 2.00pm - Dr Lisa Black (Cereal Project leader, AFBI) Carrickfergus Library, BT38 7DQ - 2.00pm - Dr Emily Robb (Postdoctoral researcher, QUB)

Monday 18 February

Falls Road Library, BT12 4PD - 2.00pm - Anna Monaghan (PhD student, UU)

Saturday 23rd February

Armagh City Library, BT61 7BU - 2.00pm - Dr Peter Smith (Senior Analytical Chemist, Almac)







NATURAL WORLD

AFBI Research Vessel Corystes

DATE Saturday 16 – Monday 18 February	TIME(S) 10.00am – 4.00pm. Tours take place every hour on the hour	
VENUE Queen's Quay, Titanic Quarter, Belfast (Beside SSE Arena)	SUITAB All A	
ADMISSION & BOOKING Free. Book via nisciencefestival.	com	

The popular Agri-Food and Bioscience Institute (AFBI) research ship, the RV Corystes, is opening its doors again to welcome aboard members of the public as part of Northern Ireland Science Festival. Join one of the hourly tours and climb on-board to get a tour of the ship, meet the crew and scientists and find out what they do when they go to sea!

Tours last 35 – 40 mins and must be booked in advance. Unfortunately, the ship cannot accommodate children or adults that are not able to walk unaided due to steep, narrow steps between decks. No high heels permitted on board.

IATURAL WORLD

Home for Insects and Memories

Thursday 21 - Sunday 24 February	Check Detail	Website For
VENUE Check Website For Details		SUITABILITY All Ages
ADMISSION & BOOKING Free. Drop In Event		

As a society dealing with massive environmental change this project captures the evolving landscape of Belfast. Thinking about the city as a home for people and for wildlife artists Robin Price and Tonya McMullan have created ten interactive 'Homes for insects and memories' snaking across the city each insect home acts as an access point where the public are invited to investigate these insect homes / sound sculptures. By pressing the buttons you are treated to stories from local residents who share their experiences of growing up in and around nature in the city.









ART C POIENCE

HMS Caroline: Maritime Babies

	Thursday 14 February	10.30 – 11.30am	
	HMS Caroline, Alexandra Dock, Queens Rd, Belfast BT3 9DT		SUITABILITY 4 months – 2 Yrs
ADMISSION & BOOKING Free. To book call 02890454484 or email learnir caroline@nmrn.org.uk		ail learning.	

This maritime themed baby sensory session will be led by an artist and will provide babies with the opportunity to explore materials, sounds, colours and textures in a range of maritime and sea-themed activities. We have capacity for one adult with every baby, refreshments for parents will be provided.



MIND & BODY

The Science of Attraction

DATE Thursday 14 February	TIME(S) 6.00 -	- 7.00pm
VENUE Lush Belfast, 27-29 Castle Ln, Belfast BT1 5DB		suitability 14 Yrs+
армізвіал & ваакімв £3. Book via nisciencefestival.com		

Join us this Valentine's day and uncover the tantalising secrets of scents and the vital role they play in the science of attraction. Discover the luxury of essential oils in some of Lush's most romantic perfumes inspired by real-life stories of love and lust. With exclusive special guests from the masters behind Lush's perfumes, uncover the stories behind the ingredients that will make you fall head over heels in love.

All proceeds for this event will be donated to Cara-Friend.





Alln NI Past, Present and Future

DATE Thursday 14 February	TIME(S) 6.30 - 8.00pm		
VENUE Ulster Museum, Botanic Ct, Belfast, BT7		SUITABILITY 16 Yrs+	
ADMISSION & BOOKING Free. Book via nisciencefestival.com			

Artificial Intelligence has become a part of everyday life. Most of us interact with AI on a daily basis without giving it a second thought. Whether using Siri or Google Assistant, Netflix or Amazon Alexa, AI has become a component of many products and services we use regularly. But where is it really impacting us and what does the future hold?

The objective of this event is to to give some insight into where AI has come from, how it impacts us

today and the near term future of AI as it relates to everyday life, to government and to healthcare.

This event brings together a panel of local experts from NI companies and universities who are using AI as part of their business in a range or areas.

The panel consists of

Dr Austin Tanney - Head of Al at Kainos, Founder and organiser of the AlNI group and facilitator of the Northern Ireland Al collaborative network. Dr Tim Davison - CTO of BrainwaveBank Dr Jaine Blayney - Bioinfromatician at the Centre for Cancer Research and Cell Biology Daniel Crawford - CEO and founder of Axial3D. After an initial lightning tour of the history of Artificial Intelligence, the panel will focus on their own experience in developing and using Al and









Blue Planet II: The Science Behind the BBC Series

Thursday 14 February	6.00 - 7.30pm	
VENUE BBC Blackstaff Studios, Dorchester House, 52-58 Great Victoria St, Belfast BT2 7WF		suitability All Ages
ADMISSION & BOOKING Free Rook via nisciencefestival (com	

Join The Open University's academics who worked on the BBC Blue Planet series to hear about the science of our oceans. Marine scientists Mark Brandon and Phil Sexton have spent years working in oceans all around the world including Antarctica, the Atlantic and the Arctic, and with the BBC Blue Planet team since 2014. Using video footage from Blue Planet II, they will talk about some of the key issues affecting our oceans, including how they 'work' and why they are important. If you are a Blue Planet fan, this is not to be missed!





Rosalind Franklin, Barack Obama and the Irish Twists in the

Thursday 14 February 7.00 -		- 8.00pm	
VENUE Graduate School, QUB, University Rd, Belfast BT7 1NN		SUITABILITY 14 Yrs+	
ADMISSION & BOOKING Free. Book via nisciencefestival.com			

Professor Mark Lawler shines a spotlight on a brilliant, dedicated scientist who was key to discovering the mystery of life, yet did not receive the honour that she deserved. In this era of #MeToo, gender pay gaps, and gender inequity in science and medicine, Mark will look back at Rosalind Franklin's lack of formal recognition for the most outstanding discovery of the 20th century and her notable omission from the award of a Nobel Prize. Mark will also highlight the significant Irish contribution to the discovery of the secret of life.







MATHS & PHYSICS

Moon: Art, Science and Culture

DATE Thursday 14 February	тіме(s) 7.00 - 8.00pm	
VENUE Crescent Arts Centre, 2-4 University Rd, Belfast BT7 1NH		suitability 12 Yrs+
ADMISSION & BOOKING £3. Book via nisciencefestival.com		

A source of light in the dark of night and our ever-changing cosmic companion, the Moon has fascinated humankind since we first gazed into the sky. Astronomer Robert Massey and art historian Alexandra Loske will present its rich and curious history, described in their new book "Moon: Art, Science, Culture".

From its violent birth through to the thrilling story of the Space Race and current exploration efforts, discover the many faces of the Moon and how they have shaped humanity's existence.

IOP Institute of Physics In Ireland

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Star Struck

	rsday 14 & Friday 15 ruary	TIME(S) 7.00 -	- 8.00pm
The	Bernard Crossland Lecture atre, Ashby Building, Queens ersity, Stranmillis Road, Bel		SUITABILITY 10-14 Yrs
ADMISSION & BOOKING Free. Book via nisciencefes		com	

Scott Marley presents an interactive journey through our nearest solar system with demonstrations to underpin the Astrophysical Principles lying behind the planetary phenomena.







SPACE

When Something Happens

DATE Thursday 14 February	TIME(S) 7.00 - 8	3.00pm
VENUE Armagh Observatory and Planetarium, College Hill, Armagh BT61 9DB		
ADMISSION & BOOKING		

An inspirational adventure for the next generation of scientists, storytellers and astronauts. When Something Happens is a short, animated VR film, written and narrated by Leicester based poet Boston "The Orator" Williams, about the 13.8-billion-year history of the universe.

This film was developed by Boom Clap Play in partnership with NISF, Digital Catapult and Northern Ireland Screen as part of the Creative XR programme; delivering a condensed version of David Christian's "Big History" framework, which defines the history of everything from Big Bang to modern day.

Formatted for VR and dome theatre projection, visitors will enjoy a preview screening and listen to a special live audio performance, featuring soundscape and poem elements from the film.

MIND & BODY

EVIIThe Science Behind Humanity's Dark Side with Dr. Julia Shaw

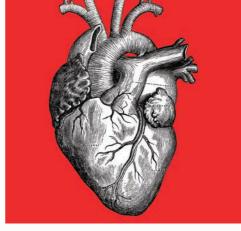
DATE Thursday 14 February	тіме(s) 7.30 - 8.30pm	
VENUE Crumlin Road Gaol, 53-55 Crumlin Rd, Belfast BT14 6ST		SUITABILITY 16 Yrs+
ADMISSION & BOOKING F8 / F6 concession Book via nisciencefestival com		

Why do we think and do evil? What can science teach us about why humans do bad things? And what do our reactions to deviance teach us about ourselves?

Drawing together science, psychology and philosophy, Dr. Julia Shaw unlocks the intricacies of the world of criminal psychology and shines a searchlight into the darker corners of the human psyche, illuminating a modern science of evil.

As a scientist in the Department of Psychology at University College London, Julia's academic work, teaching and role as an expert witness have focussed on different ways of understanding criminal behaviour. Her work has been featured in outlets such as CNN, the BBC, the New Yorker, WIRED, Forbes, the Guardian and Der Spiegel.





MIND & BODY

Hearing Your Genes Evolve

Thursday 14 February	8.00 - 9.30pm		
VENUE Sonic Arts Research Centre, 4 Cloreen Park, Belfast BT9 5HN		SUITABILITY 14 Yrs+	
ADMISSION & BOOKING £10 / £6 concession. Book via nisciencefestival.com			

Composer Deirdre Gribbin and scientist Dr Sarah Teichmann's yearlong collaboration at the MRC Laboratory for Molecular Biology in Cambridge resulted in the creation of a string quartet *Hearing Your Genes Evolve*. Together they demystify the scientific principles behind genetics. Gribbin has created a number of musical dialogues between the four instruments in a string quartet, representing variations in how the genetic code transforms and modifies as the components change.

This unique interplay creates a new form of dialogue between music, science and audience, illuminating an understanding of the everchanging nature of what makes us who we are. In association with Moving on Music and the Belfast Music Society.

MIND & BODA

Anatomy Nights -Heart Dissection Live

Thursday 14 February	TIME(S) 8.00 -	10.00pm
VENUE Black Box, 18 – 22 Hillstreet, Belfast, BT1 2LA		SUITABILITY 18+
армів <mark>sion & в</mark> оокімв £6. Book via nisciencefestival.com		

What are the heartstrings? How does the heart beat? Where is the hole in the heart? Join Clinical Anatomist, Dr. Kat Sanders and science communicator, Emer Maguire as they take you on a tour of this remarkable organ this Valentine's Day.

Please note: this session will include a dissection of an animal heart on-stage.







Baby Sensory Science

_{DATE} Friday 15 February	TIME(S) 10.00 – 10.30am & 11.00 – 11.30am	
venue Ormeau Baths, 18 Ormeau Ave, Belfast BT2 8HS		suitability 0-3 Yrs
ADMISSION & BOOKING £2. Book via nisciencefestival.com		

Using art and science your little one will enjoy a variety of sensory experiences. StarJump will provide an opportunity to play with sights, smells, tastes, sounds and touch to develop your little one's brain and curiosity. You will be advised on simple activities you can do at home, to continue with early learning. We can accommodate one adult per child. Dress for mess!



Learning from the **Belfast Primark Fire**

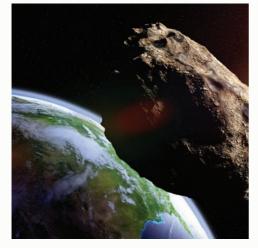
DATE Friday 15 February	TIME(S) 10.00	– 11.00am
VENUE FireSERT, Fire Dynamic laboratory - School Built Environment, FireSERT Block 27, Jordanstown Campus, BT37 0QB		SUITABILITY 14-18 Yrs
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

In 2018, within one hour of starting, the fire at the 118-year-old building that housed Primark quickly took hold of the upper storey and became what we refer to as a "travelling fire", consuming the entire building within a short period.

The World Trade Centre Towers in New York City in 2001, the Windsor Tower in Madrid in 2005, the Faculty of TU Delft Architecture building in the Netherlands in 2008 and Grenfell Tower in London 2017 - travelling fires have been observed in several structural failures across the world, particularly since 2000. FireSERT will make a laboratory demonstration of how fires spread and travel in an open space commercial compartment small scale.







SPACE

Meteorites: How Space Rocks Inspired a Space Craft

Friday 15 & Saturday 16 February	TIME(S) 1.00 -	- 4.30pm
VENUE Ulster Museum, Botanic Ct, Belfast (15 Feb) & Ulster Transport Museum, 153 Bangor Rd, Holywood (16 Feb)		SUITABILITY 10 Yrs+
ADMISSION & BOOKING Free with admission into the Transport Museum		

Meet the museum's meteorite expert to discover where meteorites come from, what they tell us about Outer Space, and how they inspired the shape of Tim Peake's Soyuz capsule. If you have your own meteorite, or think you have found one, then bring it along to discover more.

NATIONAL Museums Ni

MIND AND BODY

How to Build a Human

DATE Friday 15 February	TIME(S) 1.00 -	2.00pm
VENUE Ulster Museum, Botanic Ct, Belfast BT9 5AB		suitability 14 Yrs+
ADMISSION & BOOKING £5 / £3 concession. Book via nisciencefestival.com		

Scientists involved in the Human Cell Atlas project have set themselves the task of mapping the 37 trillion cells of the human body. Dr Sarah Teichmann describes the latest progress and illustrates the enormous benefits of this project, where scientists from across the world are analysing millions of cells in unprecedented detail. This project will provide vital information about the genes expressed within the cell and how cells change between health and disease.

After her PhD in Cambridge, Sarah was a Beit Memorial Fellow at UCL. She started a group at the MRC Laboratory of Molecular Biology in 2001 before moving to the Wellcome Genome Campus in Hinxton, Cambridge in 2013. Sarah is an EMBO member and fellow of the Academy of Medical Sciences. Her work has been recognized by many prizes, including the Lister Prize, Biochemical Society Colworth Medal, Royal Society Crick Lecture and EMBO Gold Medal.







MINID & BODY

UV Yoga

DATE Friday 15 February	TIME(S) 5.30 - 6.30pm & 7.00 - 8.00pm	
Crescent Arts Centre, 2-4 University 18+ Rd, Belfast BT7 1NH		
ADMISSION & BOOKING F.S. BOOK via pisciencefestival com		

Come and experience yoga as you've never seen it before. With muscles highlighted in UV paint, yoga teacher Louise Belshaw and the clinical anatomy specialist's, Dr Kat Sanders and Prof Gabrielle Finn, will explore the complexity of human musculature in this highly visual take on a typical yoga class. When the lights go off, what will you see under the skin?

Please note: this is a yoga class so please wear appropriate clothing and bring a mat.

FOOD FOR THOUGHT

Physics of Gin

DATE Friday 15 February	time(s) 7.30 –	· 8.30pm
venue Bullitt Hotel, 40a Church Lane, Belfast, BT1 4QN		SUITABILITY 18+
ADMISSION & BOOKING £10. Book via nisciencefestival.com		

Join physicist Dr Anne Pawsey from Edinburgh University for a hands-on exploration of the physics of gin. In this interactive workshop, you will explore the physics of alcohol, the influence of ice, and what actually happens when you shake a Martini. The rules on drinking in the laboratory may be relaxed.







TECH & DIGITAL

One of Us is a Robot

DATE Friday 15 February	_{Тіме(s)} 8.00 – 9.00pm	
VENUE Strand Arts Centre, 152-154 Holywood Rd, Belfast BT4 1NY		SUITABILITY 18+
admission & воокімс £6. Book via nisciencefestival.co	m	

Concerned about the impending insurrection of sentient AI? Come terminate one with your own stupid hands then! One of these two is a robot trying to slip into YOUR society with "relatable material" but who is it? The only comedy show flexible on murder!

It's Robbie McShane and Mary Flanigan and one of them is a goddamn robot. Are you going to let them get away with that? Both Mary and Robbie think they're the human one but only one of them is right. Can you figure out which is machine and which is mankind? You could avert the robot apocalypse or bring it to fruition. It's in your hands, all of humanity, so come on down!

MIND AND BODY

The Heart Experience

Saturday 16 February	9.00a	m - 3.00pm
VENUE St. George's Market, 12-20 East Bridge St, Belfast BT1 3NQ		SUITABILITY All Ages
admission & воокіng Free. Drop in.		

Meet the British Heart Foundation and try your hand at being a heart scientist. You can see how the blood flows around the body, what the inside of a heart looks like and touch and feel some of the technology used in heart surgery.

Science funded by British Heart Foundation has led to advances in pacemakers, transplant surgery, defibrillators and the development of statins. Learn how the charity has made history in heart research with this interactive exhibition for all ages.







Universal with **Professor Brian Cox**

	TIME(S) 8.00 -	9.30pm
VENUE SSE Arena, 2 Queens Quay, Belf BT3 9QQ		SUITABILITY All Ages

£38 - £49. Book via nisciencefestival.com

Taking audiences to the edge of our current understanding about the origin and evolution of our Solar System and the Universe, Professor Brian Cox offers a fascinating insight into the workings of nature at the most fundamental level. Whether an avid science reader or a total novice, Professor Cox makes challenging ideas accessible to all, exploring the vast, possibly infinite universe

and our place within it from earth to the edges of the cosmos.

Brian will once again be joined by co-host of The Infinite Monkey Cage and award-winning comedian Robin Ince to oversee an audience Q&A, giving fans the chance to ask any questions they have and making every show unique.

"Cox proves – and it's a consolation to learn – that our imaginations can still be put through gigantic paces."

- The Guardian







EARTH & ELEMENTS

Dye Tracing Experiment

nisciencefestival.com

DATE Saturday 16 February	TIME(S) 10.00am – 12.00pm & 1.00 – 3.00pm	
Marble Arch Caves, Warble Arch Caves, UNESCO Global Geopark, 43 Marlbank Road, Enniskillen BT92 1EW	Strictly 12 Yrs+ (children must be accompanied by a parent or guardian)	
ADMISSION & BOOKING £3 / Children aged 12-16 go free. Book via		

Marble Arch Caves provide a glimpse into a fascinating, natural underworld of rivers, winding passages and lofty chambers and are a key site within the wider Geopark. Join the Geological Survey of Northern Ireland, Arup and Caves staff to hear about the hydrology of these fascinating caves, while watching the Owenbrean River turn a luminous shade of green! Dye tracing is a method used by hydrogeologists to track and trace the flow of underground streams and rivers. Learn about the importance of dye tracing in the field of Geology and the various equipment used to carry out these exciting experiments. Find out more about the tracing experiments that have been carried out in the wonderfully wet Counties Fermanagh and Cavan!



ART & SCIENCE

Engaged Citizenship

Ecology -Performance art piece by b-beyond

Saturday 16 & Saturday 23 February	TIME(S) 10.00	am – 5.00pm
VENUE Ulster Museum, Botanic Ct, Belfast BT9 5AB		suitability All Ages
admission & воокіng Free. Drop In.		

Stein Henningsen is a performance artist living on Svalbard, an island in the Arctic. His work addresses political, social, financial and climate issues in a contemporary context. Henningsen's goal is to create provocative images that resonate with audiences and challenge them to reflect on their complicity with regard to global issues. Recent works have focused on climate change and the challenges we face. Gwendoline Robin is a Visual artist and performer based in Brussels, Belgium. Since 1997 she has been producing installations and performances, carving out a body of work that is situated between sculpture and performance. With the elements of fire, dynamite, glass, earth and water, she develops unconstrained, volatile actions that play with fragility and danger.

NATIONAL Milsfilms Ni





Mathematical Art and the Secrets of the Giant's Causeway

Saturday 16 February	10.00am – 12.00pm	
VENUE The Open University Belfast, 110 Victoria Street, Belfast BT1 3GN		SUITABILITY 10-14 Yrs
армівзіон & воокімв Free. Booking via nisciencefestival.com		

In this hands-on workshop with Charlotte Webb, Lecturer in Maths Education, children will investigate the mathematics behind regular and Archimedean tessellations, leading to creating their own collaborative, geometric art display using tessellating shapes. They will also look at a local example of tessellation that helped make the Giant's Causeway one of the wonders of the world!





SCIENCE COMMUNICATION

Centre for Cancer Research and Cell Biology Public Open Day

	Saturday 16 February	10.30am – 12.00pm & 12.30 – 2.00pm	
	VENUE Centre for Cancer Research and Cell Biology, Queen's University Belfast, 97 Lisburn Road, Belfast, BT9 7AE		SUITABILITY All Ages
-	ADMISSION & BOOKING		

Find out about the ground-breaking research taking place at Queen's University by visiting The Centre for Cancer Research & Cell Biology (CCRCB). Leading researchers will present an overview of the Centre and explain their work on the causes, early diagnosis and prevention of cancer. Get a 'behind the scenes' tour of research laboratories; meeting researchers, local charities and funding bodies. A range of interactive activities will ensure that the whole family will be able to engage in this exciting and informative event!









SCIENCE IN SOCIETY

1 Q Giant Explorers Trail

Explorers	ıralı
	_{ТІМЕ(S)} 10.30am – 12.30pm

/ENLIE

Titanic House, Queens Rd, Belfast BT3 9DT (Meeting point: Titanic Sign, next to Titanic Belfast)

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6-14 Yrs (children must be accompanied by a parent or guardian)

ADMISSION & BOOKING

£8. Contact info@titanic-foundation.org or call 02890 730490

A family-friendly trail where you will be provided with a treasure map & lots of clues as you explore Titanic Quarter, searching for industrial giants. Discover how these 'Giants' have played a huge role in TQ's maritime history and listen to some epic tales at the Great Light! There are also plenty of prizes to be won!



NATURAL WORLD

Our Resourceful Ocean

DATE TIME(S)
Saturday 16. Sunday 17. 10.30am - 4.00pm

February

VENUE

The Date Marin Control of the Cont

Saturday 23 & Sunday 24

Exploris Aquarium, The Rope Walk, Castle St, Portaferry, BT22 1NZ

3 Yrs+ (children must be accompanied by a parent

or guardian)

Free with admission into Exploris Aquarium

The ocean is undoubtedly a formidable presence on earth; covering over 70% of the planet and so deep, the highest mountain peaks can be submerged beneath its waves. Our oceans have a diversity of ecosystems, habitats, and organisms that is unrivalled by anything on land. Our oceans have an extraordinary capacity to store energy, drive our climate and provides us with life giving oxygen. However, artificial climate change through industrialisation, plastic pollution and human intervention is taking its toll. At Exploris we want to show our visitors how the ocean can provide possible solutions to many of the problems we're facing today, such as climate change and pollution caused by plastics.









North Coast Seaside Forage Walk

DATE	т _{імЕ(S)}	
Saturday 16 February	10.30am - 12.30pm	
venue	suitability	
Ballintoy Harbour, BT54 6NB	18+	
армізsіон & воокінд £8. Book via nisciencefestiva	ıl.com	

As spring advances, what better way to appreciate nature than to explore and learn about edible plants and seaweeds that grow on and close to the shoreline? We will be walking along the coastal path between Ballintoy and Whitepark Bay, looking at what's good to forage for at this time of the year. The walk will be led by Dermot Hughes of Forage Ireland, and will last about 2 hours. Please dress for the weather and expect muddy feet. Children and dogs are welcome, under control. Meeting point at Ballintoy harbour car park.



Pineapple Mania at Hillsborough Castle

DATE Saturday 16 February	TIME(S) 11.00am – 12.00pm	
VENUE The Courthouse, Hillsborough Castle, The Square, Hillsborough, BT26 6AG		suitability 18+
ADMISSION & BOOKING £6 / £5 concession. Book via nisciencefestival.com		

In the Georgian period, the pineapple was the ultimate symbol of wealth and power; found on the most fashionable dining room tables of the era. Wills Hill, the First Marguess of Downshire, was swept up in the craze for pineapples and created one of the earliest 'pineries' in Ireland, in the grounds of his Hillsborough estate. Through the remarkable skill of his gardeners he was able to cultivate this tropical fruit within the limited means of the time. Join us for this brunchtime lecture with Dr Johanna Lausen Higgins (Lecturer at Royal Botanic Garden Edinburgh / Lost Gardens of Heligan), as she uncovers the fascinating history of the pineapple and its early cultivation in UK and Ireland.





MIND & BODY

Science of Human Milk

Saturday 16 February	TIME(S) 11.00 – 12.00pm	
VENUE The MAC, 10 Exchange Stree West, Belfast BT1 2NJ	suitability et 0 – 2 Yrs & Parents/ Guardians	
admission & воокіме £3. Book via nisciencefestiva	al.com	

Discover the fascinating and wondrous properties of human milk. From immune boosting compounds and stem cells to pain killing metabolites human milk contains hundreds of unique ingredients. Breastival Belfast bring you on a journey of discovery with guest speakers.

MIND & BODY

Why NI Doesn't Breastfeed

Saturday 16 February	2.00 – 3.00pm	
VENUE The MAC, 10 Exchange Street West, Belfast BT1 2NJ		SUITABILITY 0 – 2 Yrs & Parents/ Guardians
ADMISSION & BOOKING f2 Book via nisciencefestival co	m	

Professor Amy Brown will join the Breastival team to explore why NI has such low breastfeeding rates, why it should matter to everyone and what you can do about it.

Amy Brown, author of 'Breastfeeding Uncovered' and 'The Positive Breastfeeding Book' is professor of child health at the University of Swansea. Her research explores social attitudes to breastfeeding and early infant nutrition. A popular and engaging speaker, Amy aims to unpick the myths about breastfeeding and focus on wider society and how we can all make the healthier choice the easiest choice for more families. Amy will be joined by the team from Breastival Belfast, a parent volunteer led festival working to support and normalise breastfeeding in NI.





Nico & Martin present SPACE

Saturday 16 February

11.00am – 12.00pm & 1.00 - 2.00pm

VENUE

Black Box, 18-22 Hill St, Belfast, BT1 2LA

JITABILIT

4-12 Yrs (children must be accompanied by a parent or guardian)

OMISSION & BOOKIN

£5. Book via nisciencefestival.com

Nico & Martin invite you to take part in an imaginative musical voyage into space. Orbiting instruments, original songs, galactic games and stories with a chance for all to contribute, and to top that, an encounter with...aliens? Nico & Martin are renowned for their work with children and families and specialise in creating the atmosphere for imaginative musical journeys. They are experienced multi-instrumentalist musicians. active composers and performers. Unusual sounds on unfamiliar instruments, along with the opportunity for all to experiment...wit, gentle energy and a little bit of chaos ... these are the classic components of their renowned sessions, which have entertained audiences for more than twenty years.

NATURAL WORLD

Digby - The Biggest Dog in the World (1973)

Saturday 16 February

TIME(S)

12.00pm (Film), 1.45 -2.45pm (Workshop)

VENU

Strand Arts Centre, 156 Holywood Road, Belfast, BT4 1NY

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5-10 Yrs (children must be accompanied by an adult)

ADMISSION & BOOKING

Free (£3 supplement for workshop). Book via nisciencefestival.com

Part of Strand Arts Centre's weekly Strand Saturdays activities. The film is followed by a dog (and pet therapy) themed workshop. Woof!

Young Billy is told he can't keep Digby, the loveable Old English sheepdog he's brought back from the dogs' home. Then, while being looked after by Billy's scientist neighbour Jeff, Digby drinks a top-secret growth formula - and soon the mutt has reached enormous proportions. As the army is brought in, Billy and Jeff race against time to save their shaggy pal. This comedy adventure succeeds due to its innocent daftness and, with the like of Spike Milligan, Jim Dale and Victor Spinetti, its solid roster of Brit-com talent.









FOOD FOR THOUGHT

Is Distilling Whiskey a Science or an Art?

Saturday 16 & Saturday 23 February	TIME(S) 12.30 – 2.00pm		
venue Rademon Estate Distillery, Church Rd, Crossgar, Downpatrick, BT30 9HR		SUITABILITY 18+	
ADMISSION & BODKING £30. Book via nisciencefestival.com			
L30. Book via Hisciencerestival.com			

Join the Rademon Estate Distillery team for an afternoon of Irish Whiskey. Head Distiller and Founder, David Boyd-Armstrong will lead you into the heart of his distillery, where he has been leading the charge on whiskey distilling for over three years, here you will learn more about how they craft their Irish whiskey.

You will then have the opportunity to taste some of the new make spirit, which has never been released, a true treat for any whiskey fan. The price includes a distillery tour, neat tasting, a nosing glass to take home and a £5.00 voucher towards the distillery shop.



SCIENCE COMMUNICATION

The Science of Roald Dahl

Saturday 16 February	1.00 – 2.00pm & 3.00 - 4.00pm	
^{ENUE} Jister Museum, Botanic Ct, Belfast IT9 5AB		suitability 7 Yrs+
ADMISSION & BOOKING £6. Book via nisciencefestival.co	m	

If you've ever wondered what's needed to get James' peach to fly, whether George is a genius scientist and how topsy-turvy the Twits could really be, then this is the splendiferous science show for you. Join BBC Bitesize science presenter Jon Chase as he delves into the whoopsy waffling worlds of Roald Dahl.







AIND & BODY

Free, Drop In.

Know Your Enemy: Disease-Focussed Research at Queen's University

DATE Saturday 16 February	TIME(S) 1.00 -	- 5.00pm
Wellcome-Wolfson Institute for Experimental Medicine, QUB, 9: Lisburn Rd, Belfast BT9 7BL	7	SUITABILITY All Ages

Join scientists from the Wellcome-Wolfson Institute for Experimental Medicine at Queen's to explore how the human body works and how we are leading the fight against disease. You will hear about the work of local scientists who are committed to improving the lives of patients, and who focus their efforts around three disease themes: eye disease, diabetes/vascular disease, respiratory/infectious disease. Come explore our exciting research and let us inspire you through a range of short talks, demonstrations and interactive stands, all led by our staff and students. The whole family can experience research up close and tours of our state-of-theart building will allow visitors to appreciate our commitment to the fight against disease.

FCH & DIGITAL

Northern Ireland Raspberry Jam

NISF Special

DATE Saturday 16 February	TIME(S) 1.00 – 5.00pm	
VENUE Queens University, School of Ma and Physics Teaching Centre	ens University, School of Maths	
ADMISSION & BOOKINS Free. Book via nisciencefestival.com		

Come one, come all to the Northern Ireland Raspberry Jam – NI Science Festival Special! The Northern Ireland Raspberry Jam is a free and family friendly, hands on event held every month to provide the chance for young people and adults to get hands-on making awesome projects, using code and electronics!

The day will feature workshops ranging from unicorn horn hacking, to robotics, to lasers, to music making (with code) to even the odd bit of Minecraft hacking!

Aged 6-106 and want to give coding or electronics a go? No matter if you are a complete beginner or a seasoned expert, with all equipment provided, what you waiting for?







Design-yourown-osaurus

Saturday 16 February	TIME(S) 1.45 - 2.45pm (Age 3-6) & 3.00 - 4.00 (Age 6-10)		
VENUE The Boulevard, Banbrid BT32 4LF	suitability dge, 3-10 Yrs		
admission a воокіng £5. Booking via nisciencefestival.com			

Millions of years ago Dinosaurs roamed the earth, imagine if you could see what that looked like!

Design your very own 'Dinoland' from scratch, you will make and create your vision in 3D using coloured clay. Make a Dippy Diplodocus, a ferocious Velociraptor or a terrifying Tyrannosaurus Rex.





SPACE

Look Up with Simon Watt

Saturday 16 February	2.00 – 3.00pm	
VENUE Titanic Belfast, 1 Olympic Way, Queen's Road, Titanic Quarter, BT3 9EP		SUITABILITY 6 Yrs+
ADMISSION & BOOKING £5. Booking via titanicbelfast.cor	m	

Join Simon Watt, famed science communicator, comedian and TV presenter, at Titanic Belfast, as he explores the science behind space exploration. Have you ever thought which planet is hottest? Which would float in a swimming pool? Which is the most studied? And just how much space is in space? In this amazing live show, you'll discover some incredible experiments you can recreate at home and learn more about what you can see if you only look up!









The Anatomy of Singing

	DATE Saturday 16 February	_{Тіме(s)} 2.00 – 2.45pm			
	VENUE Queen's University, Belfast, School of Msic, 2-26 University Square Mews, BT7 1LW		SUITABILITY 10 Yrs+		
	ADMISSION & BOOKING £5. Booking via nisciencefestival.com				

In an interactive presentation, participants will learn all about the anatomy of singing. Which body parts are involved in producing sounds, how many muscles do you use when singing in the shower? With the scientific accuracy of a demon barber, NI Opera will dissect your voice, using the songs of Sweeney Todd as examples.





MATHS & PHYSICS

Spots and Butterflies on the Sun: Annie Maunder, Solar Astronomer

DATE Saturday 16	February	TIME(S) 2.15 –	3.15pm	
VENUE The Old Museum Building, 7 College Square North, Belfast BT1 6AR		SUITABILITY 18+		
	ADMISSION & BOOKING Free. Booking via nisciencefestival.com			

A talk on the astronomer Annie Maunder continues the annual series on scientists from Northern Ireland organised by the Belfast Natural History and Philosophical Society. Born in Strabane in 1868, Annie Maunder revolutionised our understanding of solar astronomy by discovering the butterfly diagram, and paved the way for future generations of women researchers. This talk by Professor Silvia Dalla, a solar physicist at the University of Central Lancashire and an expert on the work of Annie Maunder, will be a great opportunity to learn about an exceptional scientist from Ulster and more about our nearest star.





MIND & BODY

W5 Late

DATE Saturday 16 February	тіме(s) 7.00 – 11.00pm	
VENUE W5, The Odyssey, 2 Queens Quay, Belfast BT3 9QQ		SUITABILITY 18+
admission & Booking £12. Book via w5online.co.uk		

W5 Late is a strictly adults-only, after-hours evening of interactive science experiments and your opportunity to engage with over 250 interactive exhibits at NI's award-winning Science and Discovery centre! Meet our humanoid robot 'Robothespian', scale the heights on 'Climbit' and engage with experts in a range of activities,

shows and talks! Explore our brand-new exhibition area 'MED-Lab', in association with Almac Group, and discover the fascinating world of pharmaceutical and biomedical science as you take an interactive journey through the body and learn how drugs are developed. Grab a drink at our bar and view the mesmerizing 'Gaia', an amazing touring artwork by artist Luke Jerram, an opportunity to see Earth like never before.











Mapping Penguins

Free, Book via nisciencefestival.com

DATE Sunday 17 February	TIME(S) 10.00	– 11.30am
Centre for GIS and Geomatic Queen's University Belfast, Elmwood Building, Elmwood Avenue, Belfast BT9 6AW	•	suitability 10 - 14 Yrs

The British Antarctic Survey regularly undertakes counts of the continent's penguin population. As penguins are Antarctica's top predators, their numbers can be used to identify changes occurring in this dynamic ecosystem. The continent; however, is too big and too remote for scientists to go out into the field and count each penguin. Researchers instead use satellite and aerial platforms to take pictures from which they can remotely count the population. In this workshop, young people will learn about the techniques used to identify and count penguin colonies before producing a web map of their findings to share with their classes. This event is run by the Centre for GIS and Geomatics at QUB.





ART & SCIENCE

Early Explorers Access Morning at HMS Caroline

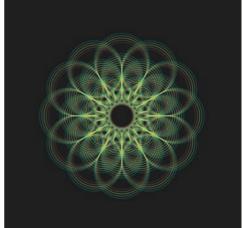
Sunday 17 February	TIME(S) 10.00am – 12.00pm	
HMS Caroline, Alexandra Do Queens Rd, Belfast BT3 9D		SUITABILITY All Ages
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

HMS Caroline is delighted to offer the 'Early Explorers' access morning for families with children and/or adults on the autistic spectrum or with other special needs. The morning will offer a range of Lego-themed activities with Bricks4Kidz/Lego Therapy NI alongside a selection of sensory science crafts and our Pest Patrol trail. The museum will be open as usual to the public, but during the morning the volume of interactives and soundscapes in the galleries will be reduced or turned off. The morning offers a great chance for the whole family to enjoy our museum in a more relaxed setting. Remember to dress warm!









The Moon: A Gateway to Planetary Frequency, Exploration Giuseppe?

DATE Sunday 17 February	TIME(S) 11.00am - 12.30pm	
VENUE Ulster Museum, Botanic Ct, Belfast BT9 5AB		SUITABILITY 14 Yrs+
армізsіон & воокіма Free. Book via nisciencefestival.c	om	•

In 2019, it will be 50 years since The Open University was established, and since the Apollo 11 landing on the Moon. These two independent but unique events have touched millions (if not billions!) of lives. In this presentation, Dr Mahesh Anand will highlight the internationally-leading lunar research carried out at The Open University on the Apollo samples and how the Moon is a natural gateway for future planetary exploration. Prepare to be inspired to make "living off the land on the Moon" a reality in the not too distant future!

What's the

DATE Sunday 17 February	TIME(S) 1.00 – 2.00pm		
VENUE Black Box, 18-22 Hill St, Belfast BT1 2LA		suitability 14 Yrs+	
ADMISSION & BOOKING £3. Booking via nisciencefestival.com			

It's controversial. So much so, there's a conspiracy theory about it. Pythagoras was a fan, and contemporary tuning practices are not. What we're talking about is Verdi's A - an A that vibrates at 432 Hz, slightly slower and therefore lower than standard A which vibrates at 440 Hz. In the debate as to what the correct pitch for concert A should be, the argument rages with pundits in both camps sticking to their guns. Musicians Colin Reid and Alan Shields explore the 432 terrain to discover whether or not there is a definite answer.







MATHEAL WORLD

Natural Selection Soapbox

DATE Sunday 17 February	TIME(S) 1.30 – 4.30pm	
VENUE Ulster Museum, Botanic Ct, Belf BT9 5AB	ster Museum, Botanic Ct, Belfast	
ADMISSION & BOOKING Free, Drop In.		

Strange insects, ancient fossils, exotic minerals and even coral reef from our own coasts. How much do you know about the hidden depths of the museum's natural history collection? Through a series of short talks, demonstrations and handson activities, our own natural sciences curators will get on the soapbox for their favourite object and will make a heartfelt plea for your vote in deciding what you would like to see more of in the museum. Think of Room 101 in reverse...what should we remove from the dark realms of the museum's natural sciences collections?

NATIONAL Museums Ni

NATURAL WORLD

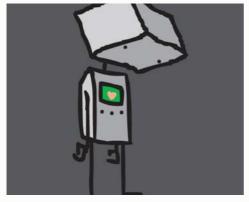
When Dinosaurs Were Sick

DATE Sunday 17 February	TIME(S) 2.00 - 3.30pm	
VENUE Elmwood Building, Elmwood Mews, Belfast BT9 6BD		suitability 14 Yrs+
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

Palaeopathology is the study of fossilised lesions and diseases in ancient animals. Although pathologies fossilise under rare circumstances, they have been recorded extensively in dinosaurs and their study has contributed significantly in recent years to a more profound understanding of the lifestyle and behaviour of these animals. The lecture will present an overview of the pathological fossil record in dinosaurs like Tyrannosaurus, Iguanodon and Diplodocus. After that, biological implications will be presented: what kind of information can pathologies tell us about the individual and the population? Is there any behaviour we can infer from them? Did the animal die because of that pathology or did it survive? And in conclusion, what are the problems addressed in palaeopathological diagnoses?









NGINEERING & BOROTICS

Digital Feelings A Faculty Lecture

Sunday 17 February	3.00 – 4.00pm	
VENUE Black Box, 18-22 Hill Street, Belfast, BT1 2LA		suitability 14 Yrs+
ADMISSION & BOOKING £6. Book via nisciencefestival.com		

What is Emotional Artificial Intelligence and how far are we from empathic and feeling machines? If computers and robots are going to interact with humans in a way that makes humans feel a real connection, they will need to become more emotionally aware. We are entering the era of the digital assistant, with Alexa, Siri, Cortana, and Google Assistant, what will it take for these systems to be able to connect with us in a way that might make us want to be friends with them.

Dr Gary McKeown is a psychologist who works in the field of affective computing. This field seeks to develop machines that can recognise and synthesise human emotions and provide empathic interfaces that simulate real human interaction. In this talk he will discuss the progress that has been made and the obstacles that remain in the goal of creating machines that interact with us in the same way as other humans.

ART & SCIENCE

Neuromusicology

- 1	_{DATE} Sunday 17 February	TIME(S) 4.00 – 5.30pm	
	VENUE The Black Box, 18-22 Hill Street, Belfast, BT1 2LA		SUITABILITY 10 Yrs+
ADMISSION & BOOKING £5. Book via nisciencefestival.com			

Join Neuroscientist Dr Niamh Kennedy and professional Harpist Ursula Burns as they explore the neuroscience of music and how the brain controls movement. Building on Dr Kennedy's research where she imaged the brains of harpists, this interactive demonstration will show how the brain works during playing of instruments. Featuring a new piece by Ursula in which she plays piano and harp at the same time, Niamh will take a live image her brain with live data visualisation.

Dr Niamh Kennedy is a cognitive neuroscientist at Ulster University with specific interest in the neurophysiology. Her research has actively involved looking at the recovery of individuals with stroke and brain injury, the interaction between motor, sensory and cognitive aspects of behaviour.

Ursula Burns is "the most Dangerous Harpist in the World". The songwriter from Belfast has 5 independently released albums - the most recent "The Dangerous Harpist".







NATURAL WORLD

Big Cats: Past, Present, Future?

DATE Sunday 17 February	тіме(s) 4.00 - 5.00pm	
VENUE Ulster Museum, Botanic Ct, Belfast BT9 5AB		suitability 12 Yrs+
ADMISSION & BOOKING f.3. Book via nisciencefestival com		

Join big cat conservationist Dr Jonny Hanson for an interactive presentation on one of the natural world's most inspiring and dynamic animal families. From tracking leopards in the African bush as a teenager, to conducting cutting-edge research on snow leopards in the Himalayas, Jonny will discuss his work with 20 cat species on four continents, and asks – is it time to reintroduce big cats to the island of Ireland?

SCIENCE COMMUNICATION

Fright Night! The Science of Horror Movies

DATE Sunday 17 February	TIME(S) 7.00 – 8.00pm	
VENUE Black Box, 18-22 Hill St, Belfast BT1 2LA		SUITABILITY 18+
ADMISSION & BOOKING f3 Rook via nisciencefestival com		

Do you like scary movies? The continuing popularity of horror films would suggest many people do. But why do we like being scared and what makes a great horror film? In this seminar, scientist and film fan Dr Declan McKenna explains the tricks that horror movies use to frighten us. Using clips from well-known films, he explains the science behind the emotional and psychological responses we experience when we watch a scary movie. It promises to be a monster night out for horror fans!





MIND AND BODY

Inventing Ourselves:

The Secret Life of the Teenage Brain with Sarah Jayne Blakemore

DATE Sunday 17 February	_{Тіме(s)} 1.00 – 2.00pm	
VENUE Waterfront Hall, 2 Lanyon Pl, Belfast BT1 3WH		suitability 14 Yrs+
ADMISSION & BOOKING £5. Book via niciencefestival.con	n	

Adolescence can often seem like a mystery, not least to the teenagers it's happening to, let alone their parents. Professor Sarah-Jayne Blakemore speaks about her book 'Inventing Ourselves', winner of the Royal Society's Insight Investment Science Book Prize, about her ground-breaking research into the adolescent brain.

We often joke that teenagers don't have brains, but in reality the adolescent brain represents a period of massive neurological development, growth and creativity. It can also be a period of vulnerability, with the need for intense friendships, excessive risk-taking and the development of many mental illnesses – depression, addiction, schizophrenia – all beginning during these formative years.

ROYAL SOCIETY

ART & SCIENCE

Dino DNA

DATE Monday 18 February	TIME(S) 10.00	am – 12.00pm
VENUE Black Box, 18-22 Hill St, Belfast BT1 2LA		SUITABILITY 6 - 10 Yrs
admission & воокімь £5. Book via nisciencefestival.com		

Millions of years ago Dinosaurs roamed the Earth, imagine if you could see what that looked like!

Design your very own 'Dinoland' from scratch by creating your vision in 3-D using coloured clay. From making Dippy the Diplodocus, a ferocious velociraptor or even a Terrifying Tyrannosaurus Rex, your imagination is the limit at this family friendly, dino-themed event.







ART & SCIENCE

Lego Trail at HMS Caroline

DATE Monday 18 & Tuesday 19 February	TIME(S) 11.00a	am – 4.00pm
VENUE HMS Caroline, Alexandra Dock, Queen's Road, Queen's Island, Belfast BT3 9DT		SUITABILITY 3 – 14 Yrs
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

All hands on deck me hearties! Join the crew from HMS Caroline and special guests Brick4Kidz, for a maritime Lego trail around the ship. This "pest patrol" themed, self-guided trail, will present lots of challenges to get you and the family thinking about the impact Marine Travel has on the conservation of vulnerable ecosystems. So, keep an eye out for the bugs and beasts on board HMS Caroline because who knows where they could be lurking...





SPACE

Little Professors

DATE Monday 18 February	TIME(S) 11.00a	am – 12.00pm
	magh Planetarium, College Hill, rmagh, Co. Armagh, BT61 9DB	
ADMISSION € BOOKING		

£2. Call 02837523689 or book via Armagh Observatory and Planetarium website.

Transport your Little Professors into the exciting world of science. From a Dome Show to songs, story-telling and hands-on experiments. This innovative event could inspire the next Albert Einstein!









NATURAL WORLD

A Winter Tree Trail in Botanic Gardens

Monday 18 & Saturday 23 February	TIME(S) 11.00am – 12.30pm		
VENUE Belfast Botanic Gardens, med Palm House			
admission & водкілів £3. Book via nisciencefestival.com			

A guided walk around the 500+ trees in the Botanic Gardens. Learn to recognize them without the visual clues of summer, starting with the conifers - the sequoias, the pines, the recently discovered Wollemia and many others from around the world. We will collect samples of deciduous trees that can be identified from their winter twigs and bark and examine these in more detail in the warmth of the Bowling Pavilion where we can make use of lenses and tree identification books.





SCIENCE COMMUNICATION

Girls Takeover at the Observatory and Planetarium

Monday 18 February	TIME(S) 1.00 -	- 2.30pm	
VENUE Armagh Planetarium, College Hill, Armagh, Co. Armagh, BT61 9DB		SUITABILITY 14 – 18 Yrs	
ADMISSION & BOOKING £7.50. Book via Armagh Observatory and Planetarium website.			

"Nothing in life is to be feared, it is only to be understood. Now is the time to understand more and fear less" - Marie Curie

Wise and very relevant words by Marie Curie. Now more than ever we need scientists, (female scientists!) to helping inform our decisions for the future. This event aims to inspire the next generation girls to take up subjects in science, technology, engineering and maths. Beginning with a Dome Theatre Show then onto a private tour of our Observatory, participants will get the opportunity to talk with astronomers and science students about their jobs and current research along the way.







Clean Transport & Smart Materials

DATE Monday 18 February	TIME(S) 6.30 -	- 8.30pm
VENUE Malone House, Barnett Demesn Belfast BT9 5PB		
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

Global warming, pollution and finite fuel resources, all sobering topics on the minds of many. And when it comes to the harming the environment our cars are some of the worst offenders. Is there a compromise we can reach that still enables us to have cars but also lessen our impact on the Earth?

Join the Institution of Mechanical Engineers and Charles Hurst for a presentation on the current state of Electric and Hybrid Vehicle Technology and their potential future developments including the decline in Diesel Sales and the growth in sales and popularity of different EV/Hybrid Vehicles. This event is part of the Clean Growth Showcase part of Innovate UK.





Innovate UK

TECH & DIGITAL

Smart Materials with Dr Anna Ploszajski

DATE Monday 18 February	TIME(S) 6.30 -	- 7.30pm
VENUE The MAC, 10 Exchange Street West, Belfast BT1 2NJ		suitability 14 Yrs+
ADMISSION & BOOKING Free Book via nisciencefestival com		

You've heard of smartphones, smart meters, smartwatches... Well now it's the turn of smart materials says award-winning materials scientist, engineer and communicator Dr. Anna Ploszakski. In the future, solid objects will react, sense, change and move according to their surroundings. This won't be a result of clever robotics or electronics. but rather the fundamental properties of these so-called "smart materials". Join Anna for this inspiring talk to find out more about our future, where living in self-regulating houses, riding self-fixing bicycles or even driving on selfilluminating roads could all be very possible in the near future due to smart materials. This event is part of the Clean Growth Showcase part of Innovate UK

Innovate UK







SPACE

First Contact: Our First Visitor From Another Star

DATE Monday 18 February	TIME(S) 7.00 – 8.	00pm
VENUE Larmor Lecture Theatre, Physics Department, Queen's University Belfast, University Road, BT7 1NN		suitability 14 Yrs+
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

In October 2017 an Interstellar Object, Oumuamua, was discovered passing through our Solar system, the first alien visitor ever seen. With little warning, astronomers had only a few days to study it before it became too faint for detailed investigation, even when using the world's largest telescopes. Our studies have revealed a body that matched some of our expectations, but that differed significantly in other aspects. We have gained considerable insight into our visitor, but many questions remain. In this talk, we will see why scientists expected to see something like this, what we have discovered about the first object to visit us from another star, and what we might expect to find in the future.

SCIENCE COMMUNICATION

MENSA Magnificent Monday Quiz

DATE Monday 18 February	тіме(s) 7.30 — 10.	.00pm
VENUE Black Box, 18-22 Hill St, Belfast BT1 2LA		SUITABILITY 18+
ADMISSION & BOOKING £2. No booking necessary		

Make the most of your Monday! Drop in to The Black Box for a light-hearted team quiz devised by Mensa. No football, no soaps - just science, technology, engineering and a bit of general knowledge. Even if your quizzing is less than impressive, grab a few friends and come on down for the craic! You might even win a prize. Teams of up to six people welcome.













CDACE

Science Starz Workshops

DATE Monday 18 & Tuesday 19 February	TIME(S) 6.30 -	- 8.30pm
venue Various libraries across Belfast		SUITABILITY 5 - 10 Yrs
admission & воокіng Free. Book via nisciencefestival.com		

Celebrate 50 years since the moon landing and 150 years of the periodic table of elements with Science Starz as they deliver hands-on workshops and investigations related to these events in science history. Children aged 5 - 10 will have the opportunity to experience being a scientist by making predictions, testing them out and observing their results in this one-hour, fun-filled, educational workshop.

York Road, Belfast, BT15 3HF

Monday 18 Feb 2.00pm | Shankill Library, 298
Shankill Road, Belfast, BT13 2BN

Tuesday 19 Feb 11.00am | Finaghy Library, 38B
Finaghy Road South, Belfast, BT10 0DR

Tuesday 19 Feb 2.00pm | Colin Glen Library,
Unit 17 Dairy Farm Centre Stewartstown Road,
Belfast, BT17 0AW

Monday 18 Feb 11.00am | Grove Library, 120

SPACE

Build a Booster Backpack

DATE Tuesday 19 February	TIME(S) 10.00	am – 12.00pm	
VENUE Black Box, 18-22 Hill St, Be BT1 2LA	lack Box, 18-22 Hill St, Belfast		
ADMISSION & BOOKING £5. Book via nisciencefestival.com			

Channel your inner space explorer, imagine it and anything is possible. Design and make a simple recycled rocket booster backpack to shoot you to the stars. Create fuel jets with flames to take you on a space adventure.





SCIENCE IN SOCIETY

Finding Planet B

Tuesday 19 February	тіме(s) 11.00am – 12.30pm		
venue Armagh Planetarium, College Hill, Armagh BT61 9DB		suitability 6 Yrs+	
ADMISSION & BODKING £2. Book via nisciencefestival.com			

The Earth has been ravaged by a series of devastating disasters as a result of climate change. You have been selected to be part of the crack team of scientists that have been tasked to find Planet B, a suitable planet for the remaining population on Earth to relocate to...before it's too late.

Join with the Geological Survey of Northern Ireland and the Armagh Planetarium for a handson role play workshop to discover just what it takes to sustain human life. Water, energy, soils, mineral resources and plate tectonics are just some of the requirements, but can you find a Planet B that has it all?





Alien Autopsy

Tuesday 19 – Thursday 21 12.00 February		pm – 1.00pm	
VENUE W5, The Odyssey, 2 Queens Quay, Belfast BT3 9QQ		SUITABILITY 6 Yrs+	
ADMISSION & BOOKING Free with admission to W5.			

W5 needs you! A mysterious Alien has crash landed in the Abercorn Basin and we need your help to discover where he came from! Join us for this one-hour, interactive family challenge to investigate the origins of our extra-terrestrial visitor.









MIND & BODY

Understanding Suicide

 DATE Monday 18 February	time(s) 7.00 –	- 8.00pm	
venue Check website for details.		suitability 14 Yrs+	
ADMISSION & BOOKING		• • • • • • • • • • • • • • • • • • • •	

£3. Book via nisciencefestival.com (All proceeds

donated to PIPs (suicide awareness charity))

Northern Ireland has the highest suicide rate in the UK, with the latest available figures showing that the rate is nearly double that in England. Since the Good Friday Peace Agreement in 1998, more people have died from suicide in Northern Ireland than were killed by violence during the Troubles. As the biggest single killer of men under 50, latest figures show suicide accounts for nearly 5,000 male deaths a year in the UK. Join Doctor and television presenter Xand Van Tulleken and Siobhan O'Neill, Professor of mental health sciences at Ulster University, for a discussion on what we know about why people develop suicidal thoughts, the local context and whether there is anything that we can do about it.







SCIENCE IN SUCIETY

Imaginary Energy

DATE Tuesday 19 February	TIME(S) 6.00 -	- 7.30pm
VENUE Crescent Arts Centre, 2-4 University Road, Belfast, BT7 1NH		suitability All Ages
admission & воокіма Free. Book via nisciencefesti	val.com	1

In this entertaining and interactive talk, Dr Stephen Peake takes us on a tour of our weird energy past and our even stranger energy future. Half of the world's 7.5 billion people don't consume enough energy to live well. The other half consume too much. How then, will 11 billion of us enjoy the high energy lifestyles we have become used to? Where will we get our energy from? How will energy change the way we live? This event features a range of theatrical demonstrations, amazing data graphics and performance elements interspersed with some boring facts - a 'Peake' into your energy future!







NATURAL WORLD

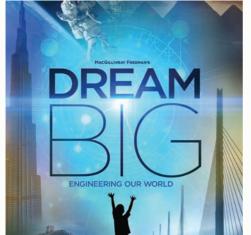
Were Dinosaurs a Victim of Climate Change?

DATE Tuesday 19 February	тіме(s) 6.30 – 7.15pm	
Main Lecture Theatre (Geography), Room 0G 012, Queen's University Belfast		
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

The extinction of the dinosaurs, 65 million years ago, has been the focus for debate for over 100 years. Yet only recently, have sudden and brief episodes of climate change in the Triassic (about 240 million years ago) been linked to the gradual increase in types and sizes of dinosaurs. This talk, by the world's pre-eminent dinosaurologist, Professor Mike Benton of Bristol University, will explore the relationship between volcanic eruptions, mass extinctions, climate change and the rise of the dinosaurs before the Jurassic. Weird and wonderful beasts will be shown and discussed, and the changing environments they lived in examined. Supported by the Geological Society London.









Dream Big: Engineering Our World

DATE T 1051	TIME(S)		
Tuesday 19 February	11.00am – 12.00pm		
VENUE Dundonald Omniplex, Dungannon Omniplex & Derry City Omniplex		SUITABILITY All Ages	
ADMISSION & BOOKING Free Book via nisciencefestival com			

Be inspired to transform lives as an engineer. Narrated by Academy Award® winner Jeff Bridges, Dream Big: Engineering Our World is a first of its kind documentary that will transform how we think about engineering. From the Great Wall of China and the world's tallest buildings, to underwater robots, solar cars and smart, sustainable cities, Dream Big celebrates the human ingenuity behind engineering marvels big and small, and reveals the heart that drives engineers to create better lives for people around the world.







SCIENCE IN SOCIETY

What's the Big Deal with Big Data?

DATE Tuesday 19 February	TIME(S) 7.00 - 8.00	pm
VENUE Graduate School, QUB, University Rd, Belfast BT7 1NN		BILITY 'rs+
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

In the wake of the Cambridge Analytica scandal, people are worried about big data. But digital technology and its application to "big data" has the capacity to transform the future of healthcare. So how do we use the power of big data while preserving the rights of the individual citizen? In this public forum, representatives from academia, the NHS, Government, industry, charities and patient groups explain how to restore public trust so that the knowledge gained through this data can bring benefits to patients and society. The Forum will also highlight the challenges and barriers that must be overcome before the transformative potential of using health data can be fully realised.







SCIENCE COMMUNICATION

Star Tracker Evening

	DATE Tuesday 19 February	time(s) 7.00 –	- 9.00pm
	VENULE Armagh Observatory and Planetarium, College Hill, Armagh, Co. Armagh, BT61 9DB		SUITABILITY All Ages
ADMISSION & BOOKING Various. Call 02837523689 or book via Armagh			Armagh

Observatory and Planetarium website

Marvel at the wonders of the cosmos on this very special evening at Armagh Observatory and Planetarium. Visitors are invited to travel to the stars through a Digital Theatre show specially chosen by Armagh Planetarium director Prof. Michael Burton. Find more about our astronomers' ground-breaking research during interactive talks and, weather permitting, be fascinated by the views of the night sky and moon through our 12-inch telescope.



NATURAL WORLD

Chemistry of Smells

Tuesday 19 February	2.00 -	- 3.00pm
Ulster Museum, Botanic Ct, Belfast BT9 5AB		suitability 7 Yrs+
ADMISSION & BOOKING Price £6 / Family of 4 £20 Book via nisciencefestival.com		

Many animals communicate using their sense of smell, releasing odours to get the message across. The insects that live together in social colonies, like ants and honeybees, are the masters (actually, the mistresses) of chemical communication. From sweet flavourings to decongestants, many of the chemicals insects use to speak to each other have surprising uses in the human world. In this fully interactive session Prof. Adam Hart, will immerse you in the smelly and disorienting world of insect pheromone communication, discovering along the way that some of the message, and the smells, are oddly familiar.







A Rap Guide to Consciousness

	DATE Tuesday 19 February	TIME(S) 7.45 –	9.15pm
	VENUE The MAC, 10 Exchange Street, Belfast, BT1 2NJ		suitability 16 Yrs+
ADMISSION & BOOKING f. 12,50 - f.25,00 book via nisciencefestival.com			val.com

Do you ever wonder about the nature of awareness and the mechanics of perception? Luckily for us. Baba Brinkman does. Selfproclaimed "peer-reviewed, science rapper" Baba Brinkman explores the scientific study of consciousness in his brilliantly entertaining "Rap Guide to Consciousness", a hit in the 2017 Edinburgh Fringe Festival and successful Broadway show at the Soho Playhouse in 2018. Baba's brain consists of roughly 80 billion neurons with trillions of connections, and none of them has any clue that he exists. And yet somehow, those cells come together to produce a steady stream of ill rhymes, laughs, and mind-blowing scientific findings. Come and find out how.

Accidental Genius

The Science, Clumsiness and Luck of Discovery

DATE Tuesday 19 February	тіме(s) 7.30 — 8.30pm		
VENUE Black Box, 18-22 Hill St, Belfast BT1 2LA		SUITABILITY 18+	
ADMISSION & BOOKING F.S. Rook via niscience festival com			

Science isn't always as careful and meticulous as you'd imagine. Many of the most important discoveries in science have been made by clumsiness, accident or dumb luck, from the microwave to nylon, via Velcro, jet streams and Viagra. This demonstration-filled session with Professor Adam Hart and the Cheltenham Science Group will measure the speed of light, create the 4th state of matter and go out with a bang to show just how important accidental genius has been in modern science.







The Marvel of Cleaning Water

DATE Wednesday 20 February	тіме(s) 11.00am – 2.00pm		
VENUE Silent Valley Mountain Park, Hea Road, Kilkeel, Newry, BT34 4HU			
ADMISSION & BOOKING Free (£4.50 parking charge applies). Drop In.			

Can you clean your own drinking water?
Discover how water is collected, stored and cleaned by taking part in hands-on experiments and investigations led by NI Water's very own scientists and engineers. While you're there, why not enjoy the famed AONB views of the Silent Valley Mountain Park by taking a walk on one of the parks six trails and learn about the industrial heritage which gave rise to the magnificent dams and shaped the surrounding landscape. Don't forget to wrap up warm on this fun, family day out!

SPACE

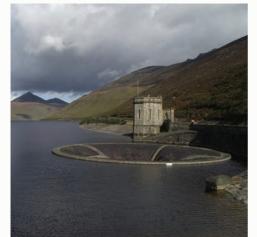
Hands-On Science at the Planetarium

Wednesday 20 February	4.00pm BUE BUITABILITY magh Observatory and Planetarium, All Ages	
VENUE Armagh Observatory and Planeta College Hill, Armagh, BT61 9DB		
ADMISSION & BOOKING Free with general admission. Dro	op-in.	

Join the Armagh Observatory and Planetarium for a day full of hands-on science workshops. Be guided through some amazing experiments by the team at the planetarium, where you will learn about our world and beyond. With fun activities to take part in for all ages, the Armagh Planetarium will be the "Place for Space" this Half-Term.









The Silent Valley Dam Rainforest Feasts An Engineering Triumph

DATE Wednesday 20 February	тіме(s) 11.30am – 12.30pm
VENUE Silent Valley Mountain Park, Head Rd, Ballymartin, Newry BT34 4PU	suitability 16 Yrs +
ADMISSION & BOOKING Free (FA 50 parking charge applies)	

NI Water are proud to host this engaging talk from renowned Chartered Engineer, Dr Philip Donald, who will provide a unique insight into the engineering triumph of the Silent Valley Dam. Belfast's population had increased from 20,000 in 1800 to 350,000 in 1900 and there was a need for increasing quantities of good water throughout this century. Civil engineer, L Livingston Macassey, designed and built reservoirs above Carrickfergus and Lisburn. However, by 1890 Belfast was running short of water. Philip explores how this resulted in the building of the spectacular Silent Valley Dam in the Mourne Mountains and the problems the engineers had to overcome to secure the water supply we rely on today.

DATE Wednesday 20 February	TIME(S) 1.00 -	- 2.30pm
VENUE Tropical Ravine, Botanic Gardens, Belfast, BT9 5AT		SUITABILITY 18+
ADMISSION & BOOKING £5. Book via nisciencefestival.com		

Come and join us in the lower canopy of the newly refurbished Tropical Ravine. Like the Victorian Plant Hunters of the past we'll delve into a world of tasting, identifying and exploring explore unknown facts about very familiar fruits. please advise in advance of all food allergies. The Tropical Ravine is a hot and humid environment, please ensure you have access to water.









Pitch 200

	DATE Wednesday 20 February	TIME(S) 5.30 -	- 7.30pm
	VENUE Black Box, 18-22 Hill St, Belfast BT1 2LA ADMISSION & BOOKING Free. Book via nisciencefestival.com		SUITABILITY 18+

Civil engineers make modern life possible. A bold statement you may say, but after this event, we think you'll agree! Pitch 200 is a quickfire event designed to transform your thinking in 200 seconds or less! Civil engineers will compete to give the best demonstration of what they do in just 200 seconds (or less), with talks ranging from transport systems, the creation of spaces for human habitation, energy, water supply and much more! Join in the fun, grab some free grub and learn how civil engineers build our quality of life.



MIND & BODY

Training Your Brainwaves

Wednesday 20 February	TIME(S) 6.00 -	- 7.00pm
VENUE Crescent Arts Centre, 2-4 University Road, Belfast, BT7 1NH		SUITABILITY 18+
ADMISSION & BOOKING Free. Book via nisciencefestival.	com	

It is a myth that we only use 10% of our brain but there are ways to improve the function of your 86 billion neurons. Neurofeedback can help people learn to modify their brain by displaying its electrical activity in real-time. By seeing and hearing the brain activity in milliseconds resolution, people can learn to modify a range of brain functions such attention or arousal. Dr Duncan Banks of The Open University will give a presentation and live demonstration showing how brainwaves can be recorded from members of the audience.







TECH & DICITAL

The Cyber Effect The Impact of Technology on Humankind

DATE Wednesday 20 February	TIME(S) 6.00 -	- 7.00pm
VENUE David Keir Building, Queen's University Belfast, Room OG115 (Stranmillis Road Entrance)	,	SUITABILITY 16 Yrs +

Cyberpsychology is the study of the impact of technology on human behaviour-cyberpsychologists provide insight at the intersection between humans and technology. The "Cyber Effect" provides some explanatory value regarding the impact of technology on humankind.

Free, Book via nisciencefestival.com

Future cyber issues and trends will be explored and a number of challenges will be considered; how do we balance competing priorities and interests in cyberspace? Are we losing control of the digital sphere? How can society ensure that technology works in our favour? This event is part of the Web At 30 series in partnership with the British Council NI.





MIND & BOD!

Innate: How the Wiring of Our Brains Shapes Who We Are

DATE Wednesday 20 February	TIME(S) 6.30 -	- 7.30pm
VENUE Sunflower Public House, 65 Union St, Belfast BT1 2JG		SUITABILITY 18+
ADMISSION & BOOKING Free. Book via nisciencefestival.	com	

What makes you the way you are and what makes each of us different from everyone else? Join Kevin Mitchell as he traces human diversity and individual differences to their deepest level: in the wiring of our brains. Guiding us through important new research, including his own ground-breaking work, he explains how variations in the way our brains develop before birth strongly influence our psychology and behaviour throughout our lives, shaping our personality, intelligence, sexuality, and even the way we perceive the world. Organised by the Belfast Science Café









Living Architecture Metabolisms for Living In

DATE Wednesday 20 February	TIME(S) 6.30 -	- 7.30pm
The MAC, 10 Exchange Street West, Belfast BT1 2NJ ADMISSION & BOOKINS Free. Book via nisciencefestival.com		suitability 14 Yrs+

Rather than "a machine for living in", as proposed by le Corbusier, Rachel Armstrong believes we should move towards "Living Architecture", i.e. the construction of spaces that possess some of the properties of living things. Why do this you may ask? Well, come along to this talk and find out! Drawing on her experience working on the living architecture research project, funded by the EU's Future Emerging Technologies Open Horizon 2020 programme, Rachel will discuss everything from using microbes to perform useful 'work' in our homes to the benefits of using natural systems on the environment to the amazing byproducts that comes with using these metabolic technologies. You'll sure to be amazed by the future of our infrastructure by the end of this talk. This event is part of the Clean Growth Showcase part of Innovate UK

Innovate UK



CIENCE IN SOCIETY

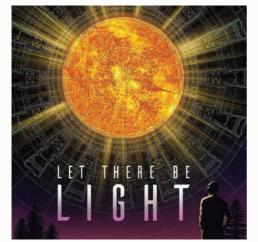
Keeping the Person in Personalised Medicine

DATE Wednesday 20 February	TIME(S) 7.00 – 8.00pm	
VENUE The Graduate School, QUB, University Rd, Belfast BT7 1NN		SUITABILITY 14 Yrs+
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

Join Professor Mark Lawler of Queens University for this panel discussion aimed at bringing together scientists, patients, industry and healthcare professionals to share their expertise, and help promote a personalised approach to the use of precision cancer medicine. Cancer treatments can be long and gruelling, even more so when the treatment received isn't the best for certain types of cancers. By using this new discipline of tailoring medication to specific needs, which Northern Ireland is a world leader in, innovative treatments can be created and will ultimately help reduce the burden of cancer for us all. This event is in conjunction with the Annual Irish Association for Cancer Research Conference which is taking place in Belfast this year.







Let There Be Light: The 100 year Journey to Fusion (Documentary Film Screening)

£5. Book via nisciencefestival.com

	DATE Wednesday 20 February	_{тіме(s)} 7.00 – 8.30pm	
	VENUE Ulster Museum Lecture Theatre, Botanic Gardens, Belfast BT9 5AB		suitability 14 Yrs+
1	ADMISSION & BOOKING		

Nuclear fusion has been the holy grail of energy for many decades now. It's the process that drives stars, the ultimate source of energy in the universe. The possibility that fusion might be achievable on Earth as an energy source has driven scientists to the edge of reason for almost a century.

As part of Second Chance Cinema at the NI Science Festival, Brendan Dromey from the Centre for Plasma Physics at Queen's University Belfast will introduce this fascinating documentary and take part in a Q+A following the showing.

IOP | Institute of Physics In Ireland



The Basics of Plant Identification

	Thursday 21 February	TIME(S) 12.30	– 2.00pm
	Belfast Botanic Gardens, Bowling Pavilion BT7 1LP ADMISSION & BOOKING £5. Book via nisciencefestival.com		SUITABILITY 18+

A guided walk around the 500+ trees in the Botanic Gardens. Learn to recognize them without the visual clues of summer, starting with the conifers - the sequoias, the pines, the recently discovered Wollemia and many others from around the world. We will collect samples of deciduous trees that can be identified from their winter twigs and bark, and examine these in more detail in the warmth of the Bowling Pavilion where we can make use of lenses and tree identification books.











SPACE

The Dome Show Mystery

Thursday 21 February	2.00 -	· 1.45pm, · 2.45pm & · 4.45pm
VENUE Armagh Observatory and Planetarium, College Hill, Armagh, Co. Armagh, BT61 9DB		suitability 10 Yrs+
 ADMISSION & BOOKING	rium	

The Dome Show Mystery is where you, the audience, get to decide what adult shows we screen on this day during the Science Festival. A poll will be available on social media to vote on and the result will be revealed to the audience in our Theatre. Go on.... vote and take a chance on what show will be screened!



BBC Make It

Super Assembly

Thursday 21 February	bruary 2.00 – 2.45pm	
venue Live Stream – bbc.co.uk/makeit	it suitability 14 Yrs+	
ADMISSION & BOOKING Free. No booking required		

The tech industry is for everyone. You don't have to be a whiz at maths and science, you won't have to spend all day behind a desk whipping up code, and you don't have to be a man!

As a Global Ambassador at Women Who Code, Sheree Atcheson is flying the flag for a new generation of women entering the IT industry. Join us for a Super Assembly with Sheree who will be talking about the fantastic opportunities the tech industry has to offer regardless of your gender, race or social stature.

Make It is the BBC's campaign to make sense of the world of work and help you become the very best you can be.







Turing Lecture 2019 Engineering a Fair Future:

Why We Need to Train Unbiased Al

DATE Thursday 21 February	TIME(S) 6.00 -	- 7.30pm
VENUE Assembly Buildings Conference Centre, 2-10 Fisherwick Place, Belfast BT1 6DW		suitability 14 Yrs+
ADMISSION & BOOKING Free Book via pisciencefestival com		

In this year's Turing Lecture Krishna Gummandi will discuss machine decision making and its increasing use in assisting, and replacing, human decision making in a variety of domains ranging from banking, recruiting, profiling criminals and even journalism. Krishna will attempt to tackle the questions surrounding bias that may arise when using machines and whether machines can help control bias or unfairness in human decisions.

Krishna Gummadi is an honorary professor of at the University of Saarland and Head of the Networked Systems research group at the MPI-SWS.



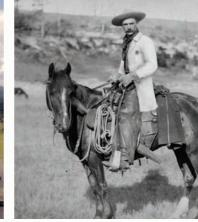


Let's Talk Genetics Rare Diseases in Northern Ireland

Thursday 21 February	5.30 – 6.30pm	
VENUE Crescent Arts Centre, 2-4 University Rd, Belfast BT7 1NH		SUITABILITY 18+
ADMISSION & BOOKING £3. Book via nisciencefestival.com		

A rare disease is one that, out of 2000, affects only 1 person. According to the NI Rare Disease Partnership, one in 17 people in Northern Ireland have such a condition. A startlingly high statistic when you consider that is more than 100,000 people affected, roughly the population size of Londonderry. During this enlightening evening, learn more about genetics and its role in rare diseases. Hear the stories and perspectives of patients, carers, clinicians and researchers, involved with and are dealing with these oftenisolating conditions on a daily basis. Have your questions answered by our panel of quests by posting those guestions on the NI Rare disease partnership Facebook page and website.





SCIENCE IN SOCIETY

Jack Kerr Memorial Lecture Society

Past, Present & Future with Dr Jago Cooper

DATE Thursday 21 February	TIME(S) 6.30 – 9.00pm	
VENUE Ulster Museum, Botanic Ct, Belfast, BT9 5AB		suitability 14 Yrs+
ADMISSION & BOOKING £3. Book via nisciencefestival.com		

Archaeology & Palaeoecology at Queen's University Belfast and the Ulster Museum present the second biennial Jack Kerr Memorial Lecture "Society: Past, Present and Future" by Dr Jago Cooper, curator of the Americas at the British Museum and presenter of BBC documentaries. Lost Kingdoms of South America (2011) and The Inca: Masters of the Clouds (2015). How can we learn from the past to address the challenges of the future? The lecture will consider this question by drawing on recent research projects undertaken by Jago in the Americas. By examining how communities innovate and adapt to the challenges they face, he will consider what lessons can be learned to help all societies live through a current century of great global change.

SCIENCE IN SOCIETY

The Food, The Bad and The Ugly

DATE Thursday 21 February	TIME(S) 7.00 -	· 7.45pm
VENUE Ulster University, York Street, Belfast BT15 1ED		suitability 14 Yrs+
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

You might not think it, but sometimes science, especially in the past, can be bad sometimes even downright ugly! Join the 3 Chemistry Amigos, Professor Burns, Dr Michael Walker and Dr Diarmaid Hanna for this varied talk unveiling the dirty truth of science ranging from:

Death by Food: the quirky, tragic and preventable ways we can be at risk from food.

Romance, Murder and Mystery: Poisonings in Victorian Glasgow

Rogues and Comedians in Chemistry: a look at some of the Chemists who disgraced the science and one or two who brought humour to the subject.











NATURAL WORLD

In the Midst of Gorillas

DATE	тіме(s)	
Thursday 21 February	7.00 — 8.00pm	
Lisburn City Library, Linenhall Street,		suitability
Lisburn. BT28 1FJ.		8 Yrs +
ADMISSION & BOOKING F5. Book via nisciencefestival.com		

Dr Michael Leach is a full-time wildlife author and photographer. He has also worked extensively in television as a wildlife cameraman on more than 100 TV documentaries for both the BBC and ITV. His work with animals has taken him all around the world and has included working with gorillas in central Africa, polar bears in the Arctic, sharks circling the Galapagos Islands and lions in Africa. Hear Michael talk about his travels and in particular, his time living and communicating with the mountain gorillas of Rwanda, the gentle, intelligent primates that we have pushed to the edge of extinction and how he used this experience to write his book The Great Apes - Faces in Nature's Mirror.

DOOT COLENOE

Control Your Thinking on the Putting Green

DATE Thursday 21 February	_{Тіме(s)} 7.00 – 8.00pm	
VENUE Ulster University, York Street, Belfast BT15 1ED		SUITABILITY 14 Yrs +
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

"Over the ball, I think about nothing other than the target. I don't focus on technique" - Rory McIlroy

But how does Rory do this? Join Dr. Lee-Ann Sharp as she explores the latest research and techniques within applied sport psychology helping us to understand how our thinking impacts our actions on the putting green. Bring along your putter to this interactive workshop for the opportunity to work alongside Lee-Ann to develop techniques that will help to control your thinking and prepare you for any putt.









MIND & BODY

ls Autism a Gift?

	DATE Thursday 21 February	TIME(S) 7.30 -	8.30pm
	VENUE Crescent Arts Centre, 2-4 University Road, Belfast, BT7 1NH		suitability 16 Yrs+
ADMISSION & BOOKING £5. Book via nisciencefestival.com			

When we think of autism we usually think of challenges and deficits, such as autistic people having difficulty with communicating, making friends or understanding others. Recently, however, we have started to understand that there are also many strengths linked to autism. In this talk Anna Remington, Director of the Centre for Research in Autism and Education (CRAE), explores the idea that different doesn't mean worse. By delving into some of the science behind the special abilities and talents often presented by autism, Anna will look at situations where these unique skills can help push society forward in new and exciting ways.

SCIENCE IN SUCIETY

Suspect Confessions

Friday 22 February	7.30 –	· 8.30pm
VENUE Crumlin Road Gaol Visitor Attraction and Conference Centre 53-55 Crumlin Rd, Belfast, BT14 6ST		SUITABILITY 16 Yrs+
ADMISSION & BOOKING £5. Book via nisciencefestival.com		

Have you ever admitted to something you didn't do? At home? At work? What would it take to own up to breaking the law? It's surprisingly common for innocent people to confess to crimes they haven't committed. For juries, confessions trump most other forms of evidence. Some people voluntarily confess things they are innocent of, yet vulnerable suspects can be lead to confess by some forms of police interviewing. From personality factors to lies, threats and torture, Dr Faye Skelton (Edinburgh Napier University) explores the psychology of false confessions and what we can do to prevent them.







Thinking In Time The Developmental Psychology of Future Thinking

Friday 22 February	10.00 – 11.30am	
VENUE Queen's University Belfast, School of Psychology, David Keir Building, 18-30 Malone Road		SUITABILITY 18+
ADMISSION & BOOKING Free Rook via nisciencefestival	om	

Humans, perhaps uniquely among animals, have the ability to think about times beyond the present. A large percentage of our waking hours are spent contemplating and planning for the future. How does this ability to think about the future develop and what are the benefits of future thinking? First, you will take part in a live experiment, using a computer-based task that examines decision-making about the future. Next, you will hear about the work that we and others have done on planning and future thinking in children. Finally, we will show you your own data and discuss what they reveal.





NATURAL WORLD

What Wood Is That?

DATE Friday 22 February	тіме(s) 11.00am – 12.30pm	
VENUE Botanic Gardens Bowling Pavilion, Belfast, BT9 5AB		suitability 18+
ADMISSION & BOOKING £5. Book via nisciencefestiva	l.com	

Can you recognise common timbers in your home? Timber trades need to know their woods, as do structural engineers, antique dealers and conservationists. See wood from a carpenter's perspective and learn about the 3-dimensional anatomy of wood as a scientist, using hand lenses and microscopes. Learn how the traditional uses of timbers are related to the microscopic anatomy of the wood









MIND & BODY

Inside Out

Friday 22 February	12.00 – 12.30pm & 3.00 – 3.30pm		
VENUE W5, The Odyssey, 2 Queens Qu Belfast BT3 9QQ	/5, The Odyssey, 2 Queens Quay,		
ADMISSION & BOOKING Free with admission to W5			

Did you know that we have over 70 organs in our body? But, what are they for and why do we need them? Join us for our brand-new workshop and journey inside the body revealing the answers to these questions.

From the heart to our lungs, discover fascinating facts about some of our most important organs and even get the chance to see some real organs from the animal kingdom, which are very similar to our own, up close!



TECH & DIGITAL

The People Vs Tech How The Internet Is Killing Democracy (and how we save it)

DATE Friday 22 February	TIME(S) 1.00 – 2.00pm	
VENUE Crescent Arts Centre, 2-4 University Road, Belfast BT71NH		suitability 16 Yrs+
ADMISSION & BOOKING £7 / £4 concession. Book via nisciencefestival.com		

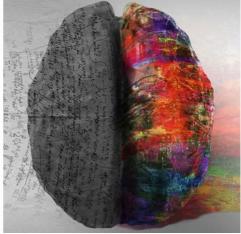
The People Vs Tech: How the Internet is Killing Democracy (and how we save it) is the uncompromising subtitle of bestselling author, Jamie Bartlett's new book. Each week, it seems, the news is full of stories about 'big tech', Russian hackers and Facebook's growing role in politics. Under all of this noise is a simple truth; digital technology and democracy are incompatible. So what do we do? Jamie Bartlett proposes some answers.

This event is part of the Web At 30 series in partnership with the British Council NI. This series focuses on the impact of the web on our lives, 30 years since Tim Berners-Lee laid out his vision for what would become the web.









MINID & PODY

Belfast's Forgotten Medical History Walking Tour

DATE	TIME(S)	
Friday 22 February	4.00 – 7.00pm	
venue		suitability
Tour starts at Belfast City Hall		14 Yrs+
ADMISSION & BOOKING £5. Book via nisciencefestival.com		

Starting with an engrossing historical walking tour, discover which diseases and illnesses afflicted those living in Victorian Belfast, what life was like in Belfast's asylums and how doctors coped during the Troubles.

At the end of the walking tour, talks will be given in Ulster University's Belfast campus foyer by leading medical historians. Wrap up warm!



ART & SCIENCE

Art X Science Showcase

DATE Friday 22 February	TIME(S) 5.30 -	– 7.00pm	
VENUE Ulster University, 25-51 York St, Belfast BT15 1ED	Jister University, 25-51 York St,		
ADMISSION & BOOKING Free. Book via nisciencefestival.com			

Ulster University artists and scientists will work closely with children and young people to develop artistic responses to scientific findings. This innovative collaboration aims to foster strong links between scientists, artists and schools. Join us for a fantastic evening celebrating a showcase of work created in collaboration between Ulster University artists, scientists with children and young people.







SPACE

Cosmic Cuilcagh

DATE Friday 22 February	TIME(S) 6.30 -	- 10.00pm
Marble Arch Caves, UNESCO Global Geopark, 43 Marlbank Rd, Legnabrocky, Florencecourt, Enniskillen, Co. Fermanagh	ble Arch Caves, UNESCO bal Geopark, 43 Marlbank Legnabrocky, Florencecourt,	
Adult £5, Child £3, Family (2 adults, 2 children) £1		nildren) £12.

Due to its location - straddling the border between Counties Fermanagh and Cavan - the remarkable Marble Arch Caves UNESCO Global Geopark has inky dark skies to rival many. The Marble Arch Caves Visitor Centre, nestled in the foothills of Cuilcagh Mountain, is a perfect place to observe and learn more about the mysterious night sky above!

Join Geopark staff and Dark Sky Experts including the Irish Astronomical Association and Sirius Science for an exciting evening involving outdoor stargazing (so wrap up warm) and an array of entertaining interactive indoor activities and shows for all ages.





SPALE

Planetarium After Dark

Friday 22 February	7.00 –	9.00pm
VENUE Armagh Planetarium, College Hill, Armagh BT61 9DB		SUITABILITY 18+
ADMISSION & BOOKING £15. Book via armaghplanet.com	or 028	3752 3689

Join the Planetarium After Dark where adults get the chance to take over the facility for Dome Shows, adult science experiments, meteorite talks, astronomy talks and you will have the chance to view the night sky through our telescope (weather depending). Sound good? Did we mention you will also get the chance to make some intergalactic space cocktails/mocktails in our space drinks workshop.





SCIENCE COMMUNICATION

LaTe LaB

DATE Friday 22 February	_{Тіме(S)} 6.30 – 10.30pm	
VENUE Ulster Folk and Transport Museum, 153 Bangor Rd, Holywood BT18 0EU		SUITABILITY 18+
ADMISSION & BOOKING £6. Book via nisciencefestival.com		

Come in, Mission Control. Northern Ireland's ultimate science party is back in an exciting new venue! As part of the NI Science Festival, LaTe LaB will be taking place at the Ulster Transport Museum to celebrate the arrival of the Tim Peake's Spacecraft in association with Science Museum Group and tour partners Samsung. Marvel at mindbinding physics as the Ulster Transport Museum is transformed for one night only into a tardis full of breathtaking live experiments, spectacular science shows and mercurial music. Our chemistry cocktails will no doubt help catalyze your evening's fun, so don your best geek chic and join us for a UFO (Unbelievably Fun Occurrence)!

NATIONAL Museums Ni



MIND & BODY

Joel.M -Prediction, Process, Pronouncement

DATE Friday 22 February	TIME(S) 8.00 – 10.00pm	
VENUE Strand Arts Centre, 152-154 Holywood Rd, Belfast BT4 1NY	SUITABILITY 18+	
ADMISSION & BOOKING £6. Book via nisciencefestival.com		

Science isn't rigid. You can perform an experiment several times and get different results. There are so many unknown variables that even the most brilliant minds can get things wrong. Everything's just a working thesis right? So try and explain how a wee lad from Bangor can consistently predict things that no amount of science can explain.

Joel.M is a magician, psychological illusionist, and possibly a real life wizard. Play witness to the impossible, as he crawls inside your mind, and warps your perception. In this one off NISF show Joel will play around with the fabric of the universe and the synopsis of your brain and then he might just blow your mind. The closer you look, the less you'll see.





FUUD FUR THUUGHT

Why do Guitars Taste of Hops?

The Science of Beer

DATE Friday 22 February 2019	TIME(S) 8.00 – 10.00pm	
VENUE Black Box, 18-22 Hill Street, Belfast, BT1 2LA		SUITABILITY 18+
ADMISSION & BOOKING £15 (Price includes 6 samples of beers). Book via nisciencefestival.com		

Your brain is lying to you. You have more than five senses. And you can hear the difference between IPA and stout. Pete Brown has been running experimental beer tastings pairing top tunes and beers for six years. This talk is a mixture of fandom, humour, and genuine neuro-scientific research. Think it sounds like nonsense? Come along to the Black Box and have your sense challenged. If you're right, you'll at least taste some great beers. If you're wrong, you just might taste them like you never have before.



NATURAL WORLD

Time-travelling in a Northern Ireland Bog

	Saturday 23 February	тіме(s) 9.15ar	n – 1.00pm
	VENUE Field Trip starts from Archaeolog Palaeoecology, 42 Fitzwilliam Str Queen's University Belfast		suitability 18+
ADMISSION & BOOKING £6. Book via nisciencefestival.com			

Ireland's bogs first formed towards the end of the last ice age. Since then, they have been accumulating peat, which comprises the partly decomposed remains of the plants that once grew on the bog, as well as insects and microscopic fauna that lived on the bog, and steadily capturing snapshots of environmental change over the millennia.

This fieldtrip will visit Sluggan Moss, Co. Antrim, where we can track the bog's development over time through its exposed peat face. We will consider the different techniques palaeoecologists use to reconstruct past environmental and climate change. Using a peat corer, we can probe further back in time, all the way to the Last Ice Age. Transport will be provided from QUB.







Create with Claude

DATE Saturday 23 February	TIME(S) 10.00 – 11.00am & 12.00 – 1.00pm	
VENUE Sixteen South Studios, 1 Clarend Street, Belfast, BT2 8DX	SUITABILITY 3 - 10 Yrs (Children must be accompanied by a parent or guardian)	
ADMISSION & BOOKING F5. Rook via nisciencefestival co	ım	

BAFTA award winning Belfast-based studio Sixteen South has produced the popular new Claude Series which is based on an adaption of the best selling book series by Alex T Smith and published by Hachette Children's Group. Claude charts the adventures of an animated beret-clad dog is currently shown on Disney Junior Network and in all countries across Europe, the Middle East, Africa and Australia.

As part of this bespoke event, children will has an opportunity to learn how to draw Claude, watch an episode from the series Rampaging Robots, make their own personal Claude badges, decorate a robot money box and take part in a colouring competition with amazing prizes

Controlling your ISO Noise

	Saturday 23 February	TIME(S) 10.00a	am – 12.00pm	
	elfast Exposed, 23 Donegall Street, elfast, BT1 2FF		SUITABILITY 18+	
ADMISSION & BOOKING £20. Book via m.smyth@belfastexposed.org		d.org		

Get a full understanding of how noise through ISO can be controlled in your images through Quantum Efficiency. Using Plank's Constant we are able to measure the light and frequency of light on the camera sensor.

This workshop will combine the Theory of Planck's Constant together with the camera exposure ISO setting to offer the correct ISO setting for you photographs in any situation to avoid noise.







Belfast on the Brink

DATE Saturday 23 February	TIME(S) 10.00am – 12.30pm		
VENUE Medical Biology Centre, 97 Lisburn Road, Belfast, BT9 7BL		suitability 8 Yrs+	
ADMISSION & BOOKING £3. Book via nisciencefestival.com			

Belfast is on the brink of a pandemic - the airborne HULC (Human Unidentified Luminous Contagion) virus is sweeping across the city. For one day only, Queen's Medical Biology Centre is acting as Belfast's Centre for Disease Control and visitors are invited to participate in the journey of Discovery to Recovery. As a multidisciplinary team of Scientists, Researchers, Medics and Communications Specialists, you will identify the contagion, treat the infected victims, develop a cure and design a public health campaign to prevent the spread of further infection.

Once you have saved Belfast from the brink, please join us for some post-pandemic pizza.





MATHS & PHYSICS

The Greatest Inequality in Maths

Acknowledgement of Female Success

DATE Saturday 23 February	TIME(S) 10.00 – 11.30am	
VENUE Old Museum Building, 7 College Square N, Belfast BT1 6AR		suitability 14 Yrs+
ADMISSION & BOOKING Free. Book via nisciencefestival.c	com	

From Hypatia (murdered by a Christian mob in 415 CE) to Ada Lovelace (the enchantress of numbers) and Maryam Mirzakhani (the 2014 Fields medallist) there have been women who have loved mathematics and, often in defiance of the social and intellectual norms of the day, have shown themselves to be extremely good at it. The Open University's Professor June Barrow-Green will introduce a number of these women, describe some of the difficulties they encountered and indicate what they managed to achieve. She will also look at the situation for women mathematicians today and describe some initiatives currently in place for tackling the gender gap in mathematics.











ART & SCIENCE

Titanic Taster Photography Tour

DATE Saturday 23 February	_{тіме(s)} 10.30am – 1.30pm
VENUE Tour starts from Titanic Sign at Titanic Belfast	suitability 18+
ADMISSION & BOOKING	

£25. Contact info@titanic-foundation.org or call 02890 730490

Become a Titanic inspired photographer for the day, learning all about the science behind photography while having the opportunity to explore Titanic Quarter's industrial & maritime heritage. Photography is the physics of light and you will learn how to use light to create stunning images and the power of magnification at our very own giant optic lenses.

On this interactive tour, stops include the Great Light, Titanic's Dock & Pump-House and H&W Cranes.



SCIENCE COMMUNICATION

Ask Us Anything

	DATE Saturday 23 February	тіме(s) 11.30am – 12.30pm	
	VENUE Ulster University, 25-51 York St, Belfast BT15 1ED		suitability All Ages
ADMISSION & BOOKING Free. Book via nisciencefestival.com			

Do you wonder why the sky is blue? Or why are plants green? Or how the heart works? Maybe you want to know how the Universe might have come from nothing? Come along with your questions and see what answers you can get from an expert team of Ulster University's finest!







SPACE

Muppets From Space Physics Busking

(Workshop)

Saturday 23 February 12.00 – 1.30pm (Film) 1.30 – 2.30pm (Workshop)

VENUE Strand Arts Centre, 156 Holywood Road, Belfast, BT4 1NY (Film). 6-10 Yrs

ADMISSION & BOOKING

Free (£3 supplement for workshop). Book via strandartscentre.com

A question that has bothered Muppet fans for as long as they have existed - exactly what kind of creature is Gonzo? This is answered in this cheerful extraterrestrial comedy... Gonzo starts getting messages through his cereal in the morning, and soon mysterious government agents are on his tail. There are great jokes here for everyone (adults will enjoy big-name actors turning up for tiny cameos) and a great soundtrack full of 1970s funk.

Part of Strand Arts Centre's weekly Strand Saturdays activities. Film is followed by a fun scientific workshop with the Party Professor.



Saturday 23 February 10.00am – 4.00pm VENUE Ulster Transport Museum, 153 Bangor Rd, Holywood BT18 0EU

Free with admission into Transport Museum

Join the infamous team of physics buskers alongside Tim Peake's Soyuz Capsule as they conjure up demos and tricks to explain how everything works in the universe. The laws of physics that brought Tim Peake back to Earth in the tiny metal capsule will be brought to life using everyday objects and bucket loads of enthusiasm. Prepare to be enthralled as the secrets of nature are revealed in an engaging and accessible way. Bring the whole family!

IOP Institute of Physics In Ireland







Meet Dino-Doc!

DATE Saturday 23 February	_{Тіме(s)} 1.00 – 2.30pm
VENUE School Of Natural & Built Environment, Elmwood Avenue, Belfast, BT7 1NN	suitability 10 Yrs+
ADMISSION & BOOKING £2. Book via nisciencefestival.co	m

In this hands-on workshop, learn about the wonders of dinosaur biology (skeletal anatomy, evolution, extinction, and behaviour) while also using examples from modern animals such as crocodiles, birds and large mammals. Then come together in groups to identify and describe a 3D printed dinosaur bone.

Where does it belong in a skeleton? What kind of anomalies do you detect? In the end, try to guess the type of pathology and a possible explanation for what happened to the dinosaur!





SCIENCE IN SOCIETY

Queen's Archaeology Hidden Treasures

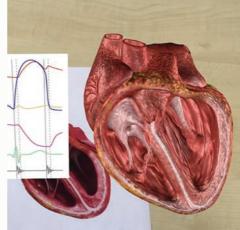
DATE Saturday 23 February	TIME(S) 2.00 -	- 3.30pm
VENUE Archaeology & Palaeoecology Centre QUB, 42 Fitzwilliam Street, BT9 6AX		SUITABILITY 5 Yrs+
ADMISSION & BOOKING		

Ever wondered what ancient treasures are kept hidden away in storage, only seen by archaeologists and specialists? Have you always wanted to touch the objects in museums with a "Please don't touch" sign?

Archaeology researchers and students bring out some of the most beautiful ancient artefacts directly from the vaults of Queen's Archaeology department. Come and see the collection of rare items from Ireland, Egypt and Rome. Come and touch the teaching collection, as used by archaeology lecturers. Come and discover the new digital technologies and scientific techniques that are helping us bring archaeology to your living room. And come and talk with archaeology researchers and find out what new things are being discovered.







SCIENCE IN SOCIETY

Superheroes: When Science Meets Sci-Fi

DATE Saturday 23 February	TIME(S) 3.00 – 4.30pm	
VENUE Ulster University, 25-51 York St, Belfast BT15 1ED		SUITABILITY 10 Yrs+
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

Calling all chemists, physicists, biologists, and comic book fans of all ages ... help science meet sci-fi and design a superhero using science.

Join our panellists to discuss the science behind their favourite superheroes and get involved in designing a completely new, next level superhero. The session will explore the current state of the superhero field, what superhero traits and skills should we keep and what new traits and skills do we want. Our team of superhero-loving scientists will lead this ambitious superhero upgrade project with lots of help from the audience and a live illustrator.



SCIENCE COMMONICATION

Science on Screen

	DATE Saturday 23 February	TIME(S) 10.00	am - 2.00pm	
	venue St. George's Market, 12-20 East Bridge St, Belfast BT1 3NQ		suitability All Ages	
admission & воокіng Free. Drop In.				

Come and try out some of The Open University's virtual resources at our pop-up display. You will get a realistic insight into the structure of the heart using the Augmented Reality heart, learn more about what's in our oceans using our Oceans Explorer app or you can simply challenge yourself to some mathematical puzzles using the Perplex maths puzzle app.









ART C POIENCE

Fly on the Wall

DATE Saturday 23 February	тіме(s) 9.00am – 3.00pm	
venue Lanyon Place Station East Bridge St, Belfast BT1 3PB		SUITABILITY All Ages
ADMISSION & BOOKING Free. Drop In.		

Visit Lanyon Place Station to see, hear and be part of this new interactive sound installation consisting of hundreds of moving fly sculptures. The installation incorporates interviews and sounds created with a group of young people from Include Youth, a regional rights-based charity for young people in or leaving care. The group worked with artists Robin Price and Tonya McMullan to create the sounds that are a mixture of interviews and original material that has come about through engaging with the theme of Home.



City Council

TECH & DIGITAL

Immersive Technologies

DATE Saturday 23 February	TIME(S) 11.00am – 5.00pm	
VENUE Sonic Arts Research Centre, Queen's University, Belfast, BT9 5BQ		suitability All Ages
admission & воокіng Free. Drop In		

The Sonic Arts Research Centre at Queen's University opens its doors to the public to show a range of current VR (Virtual Reality) works. Come and have a look, and listen to 360 sounds in the unique Sonic Laboratory. During the day you can take part in some hands-on workshops to explore exciting broadcasting and green screen technologies.





SCIENCE COMMUNICATION

Horrible Science with Nick Arnold

DATE Saturday 23 February	TIME(S) 11.00am – 12.00pm & 1.00 – 2.00pm		
VENUE Ulster Museum, Botanic Ct. Belfast, BT7		SUITABILITY 7 Yrs +	
ADMISSION & BOOKING £6 each or £20 for family of 4 (2 adults & 2 children). Book via nisciencefestival.com			

Nick Arnold is the bestselling children's author of the Horrible Science Books which have been amazing children for more than 20 years. Nick has presented his Horrible Science Show at festivals, in schools and in libraries all over the world to audiences both young and old. This high-energy interactive show brings the Horrible Science books to life using humour, experiments, activities and competitions. It's loud, it's funny – and guaranteed to please.





EARTH AND ELEMENTS

Free. Drop In Event

Our Violent Earth

DATE Saturday 23 February	_{Тіме(s)} 12.00 - 3.00pm	
VENUE Slieve Gullion Courtyard & Forest Park, 89 Drumintee Rd, Meigh, Newry BT35 8SW		SUITABILITY All Ages
ADMISSION & BOOKING		

Many of us watch in awe as we see dramatic volcanic eruptions and destructive earthquakes feature on the news from around the world. But not many of stop and think that these violent events would have wreaked havoc on our own landscape as recently as 55 million years ago. Come and find out more about these events through a series of hands-on activities and interactive demonstrations at the Slieve Gullion Courtyard, located within one of the most recently active volcanic areas in Northern Ireland. You can handle 'lava', erupt your own volcano, become part of a human seismic wave, and get to make your very own seismometer as well as lots of other activities throughout the day. This event is one of a series being organised as part of the proposed UNESCO Global Geopark in Mourne Gullion and Strangford.

TECH & DIGITAL

The Science of Immersive Sound

DATE Saturday 23 February	TIME(S) 3.00 -	- 4.00pm
venue Sonic Arts Research Centre, Que University, Belfast, BT9 5BQ	ic Arts Research Centre, Queen's	
ADMISSION & BOOKING	m	

Even the most vivid film or video-game sounds can sound "in our head" through a pair of headphones. What is it about the sound that tells us where it is coming from? And what technological solutions are needed to make auditory illusions as immersive as real life? We look at existing technology and the resourceful auditory system that it tries to trick as well as the future developments that could be mainstream within the next few years. Arrive early to experience the immersive sounds of the Sonic Lab.









NATURAL WORLD

The Rise and Fall of the Dinosaurs

Saturday 23 February	3.00 – 4.00pm	
VENUE Ulster Museum, Botanic Ct, Belf BT9 5AB	fast 11 Yrs +	
ADMISSION & BOOKING £6/£3 concession. Book via nisciencefestival.com		

Based around his acclaimed book, The Rise and Fall of the Dinosaurs: The Untold Story of a Lost World (The Times Science Book of the Year 2018), leading palaeontologist and evolutionary biologist Steve Brusatte shows how these remarkable creatures created a 150 million year empire that saw human-size tyrannosaurs, carnivores even larger than a T. Rex and feathered raptors. He describes a real and even more fascinating Jurassic world.



MIND & BODA

The Laughter Factory

DATE Saturday 23 February	TIME(S) 3.30 -	- 5.00pm	
VENUE School of Psychology, David Keir Building, Queen's University Belfast		suitability 14 Yrs+	
ADMISSION & BOOKING Free. Book via nisciencefestival.	com		

The Laughter Laboratory brings years of laughter research in the School of Psychology at Queen's University into the open. In this session we will run experiments on the way people perceive laughter in an attempt to demonstrate what is so special and unique about this universal behaviour. We will then do some hard work in groups to explore the highly reliable methods that we have developed over years of research to make laughter happen. The session will finish with a short talk on the nature of laughter, bringing together the aspects that are explored during the interactive parts of the session. Come prepared to laugh and be laughed at.









Neo Neo #7

DATE Saturday 23 February	TIME(S) 8.30pm – late
VENUE Black Box, 18-22 Hill St, Belfa BT1 2LA	suitability ast 18+
ADMISSION & BOOKING £7. Book via nisciencefestiva	l.com

NEO NEO showcases high quality contemporary music and visual art through live events with a focus on experimental electronic performance, new technology and collaborative practices. Each curated event features music creators and artists commissioned to respond to each others' practice and present work or works in progress in the format of a unique immersive experience for both performers and audiences.

NEO NEO #7 is presented in partnership with TONN Recordings. TONN is an independent record label dedicated to electronic music and committed to the best in contemporary cold wave and select synth. This event will feature; MADMOIZEL, This Is The Bridge, Jared Longlands, Michael Hanna and TONN DJs.

NEO NEO #7 is supported by Help Musicians Women In Music Fund.

Taking a Closer Look at the Rocks **Under Our Feet**

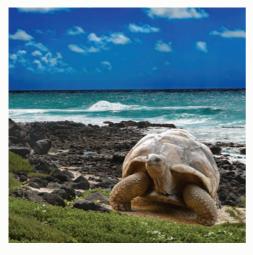
	Saturday 23 & Sunday 24 February	11.00am - 3.00pm (Sat) & 12.00 - 4.00pm (Sun)	
•	VENUE W5, The Odyssey, 2 Queens Quay, Belfast BT3 9QQ		suitability All Ages
	ADMISSION & BOOKING Free with admission into W5		

The Open University's special rock kits and virtual rock kits will be on display to enable us to showcase the types of rocks that are under our feet and the resources that we can use to identify them and view them close up.

Drop by to see samples of rocks on display and view them through our microscope! You can select a rock or mineral and examine it virtually.









NATURAL WURLD

The Galapagos Evolution and Global Change

DATE Sunday 24 February	TIME(S) 12.30pm – 2.00pm	
VENUE Lecture Theatre 1, Medical Biolo Centre, 97 Lisburn Road, Belfast BT9 7BL		
ADMISSION & BOOKING £3. Book via nisciencefestival.co	m	

The Galapagos are famed as the biological wonderland where Darwin formulated 'The Theory of Natural Selection'. From finches to giant tortoises and beyond: Nature's evolutionary toolbox was first identified on these islands. The Galapagos are still a remarkable melting-pot of biodiversity.

Liz Bonnin will present her experiences visiting the islands while developing a series on their natural history for BBC television. She will be joined by QUB academics from the School of Biological Sciences: Dr Jonathan Houghton, a marine biologist who works on the Galapagos today, and who is interested in studying the impact of global change; and finally Professor Chris Allen will discuss how Darwin's remarkable theory has led to exciting technologies that are delivering incredible innovations.



Bath Bombs & Bubbles!

		- 2.30pm & - 4.30pm	
		SUITABILITY 6 Yrs+	
ADMISSION & BOOKING £4. Book via nisciencefestival.co	m		

If you've ever wondered how your favourite bath bomb fizzes, or how your bubble bars make mountains of fluffy bubbles, this is the event for you. You'll get an exclusive look at the science behind Lush's most exclusive bath products plus the chance to become a Lush compounder and craft your favourite bath time treats. If your little ones, or yourself, love our bath bombs come along and find our how to turn bath time into a science experiment.













Deep Ocean Lab with Greg Foot

DATE Sunday 24 February	TIME(S) 1.00 -	- 2.00pm
VENUE Ulster Museum, Botanic Ct, Belfast BT9 5AB	SUITABILITY 10 Yrs+	
ADMISSION & BOOKING F8 / F6 Book via nisciencefestival com		

What happens as you dive further and further into the dark ocean?

Join Blue Peter Science presenter and YouTuber Greg Foot for the story of his scientific adventure to the deep.

With experiments and stunning videos, Greg will show you the high-tech submersibles that took him down a crazy 1000ft into the Twilight Zone. He'll explain the importance of our oceans, and - thanks to Greg's work with the Blue Planet II team - uncover the effect we're having on them.



NATURAL WORLD

Everest Lab

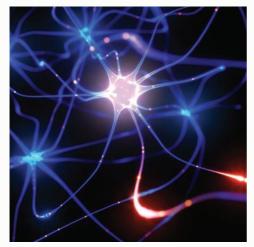
The Science of High Altitude with Greg Foot

DATE Sunday 24 February	тіме(s) 3.00 – 4.00pm	
VENUE Ulster Museum, Botanic Ct, Belfast BT9 5AB		suitability 10 Yrs+
ADMISSION & BOOKING £8 / £6. Book via nisciencefestival.com		

What happens to your body when you push it somewhere it's not built to go - to the top of the world?

In the second of his NI Science Festival talks, join YouTuber & Blue Peter Science Guy Greg Foot for the story of his scientific adventure to the world's highest pop-up lab at Everest Base Camp.

With summit kit, interactive experiments, and stunning videos, Greg will uncover how a group of scientists and medics braved the thin freezing air to perform cutting edge research that turns our ideas about medicine upside down.





MIND & BODY

Diagnose Me Please, Treat My Disease

DATE Sunday 24 February	TIME(S) 2.00 – 3.30pm	
VENUE Black Box, 18-22 Hill St, Belfa BT1 2LA	suitability ist 14 Yrs+	
ADMISSION & BOOKING £2. Book via nisciencefestiva	.com	

Join Claire Hill, PhD student at Oxford University, as she brings together leading scientists to discuss their cutting-edge research in the field of biological science. Prof. Denise Fitzgerald (QUB), Prof. Dave Carter (Oxford Brookes) and another leading researcher take to the stage to enlighten us about how their research is paving the way to brand-new diagnostics and therapeutics for diseases such as multiple sclerosis and cancer.

Presentations will be followed by Q&A sessions; our experts are here to answer your questions.

FOOD FOR THOUGHT

Gut Health Goes Global

Sunday 24 February	TIME(S) 3.00 – 4.00pm	
venue Black Box, 18-22 Hill St, Belfast BT1 2LA		SUITABILITY 16 Yrs+
ADMISSION & BOOKING £6. Book via nisciencefestival	.com	

It seems that the world has woken up to the fact that fermenting your food is good for you. That it creates a food which is more digestible and in some magical way mimics the landscapes of life inside your gut. But what exactly are in these foods. Join The Culutured Club and Professor John Leech (from the world's leading research institute in all matters of the microbiome) to find out exactly what kind of microbes are created in the process of fermentation.

Expect a revealing microbial soup which will have you chopping cabbage and making kimchi toute suite!





SCIENCE COMMUNICATION

Maddie's Fantastic Factory Tour!

	Sunday 24 February	1.00pm – 1.45pm & 3.00pm – 3.45pm	
	VENUE The MAC, 10 Exchange Street W Belfast BT1 2NJ		
ADMISSION & BOOKING £8 / £6. Book via nisciencefestival.com			

Welcome one and all, Maddie is opening the doors to her fantastic factory for the very first time! Maddie is always busy exploring factories on telly

and YouTube but now she's inviting you all to join her own tour and marvel at the machines inside! Come along and find out how some of her favourite things are made live on stage, with a little help from her special cameras.

"In your most curious of dreams you could not imagine the discoveries that await you!"



NATURAL WORLD

Wild Weather, Physics and Climate Change (or 12 Years to Save the World)

DATE Sunday 24 February	TIME(S) 1.00 - 2.30pm	
VENUE Whitla Hall, University Road, Belfast, BT7 1NN		SUITABILITY 14 Yrs+
ADMISSION & BOOKING £6. Book via nisciencefestival.com		

Following a year of wild weather and the IPCC's dire warning of 12 years left to stabilize the planet, we invite you to join a conversation on one of the most pressing challenges facing humankind - global warming and climate change. Scientific consensus has shown that human-caused emissions of greenhouse gases and removal of carbon sinks through deforestation have changed our climate by increasing the planet's

temperature. This additional heat is trapped in the oceans and atmosphere and is predicted to cause extreme and, in places, catastrophic weather conditions.

BBC NI weather presenter, Geoff Maskell, hosts an afternoon discourse and illustrated documentary with Dr Helen Czerski, physicist who presented Climate Change: A Horizon Guide and Prof Peter Thorne, climatologist and lead author on the recent IPCC Climate Report. This will be an authoritative discussion covering the basic science involved, local examples of climate change and what needs to be done to avert disaster.

IOP | Institute of Physics In Ireland





SCIENCE IN SOCIETY

Drowning in Plastic with Liz Bonnin

DATE Sunday 24 February	тіме(s) 4.00р	m – 5.30pm
Whitla Hall, University Road, Belfast, BT7 1NN		suitability 14 Yrs+

£14/£12 concession. Book via nisciencefestival.com

Science and wildlife presenter Liz Bonnin examines one of the biggest environmental threats facing the modern world. As science reveals the full extent of the ocean plastic crisis, she investigates the obstacles that must be overcome as a matter of urgency to solve it.

The reaction to the plastic crisis by the British public has been remarkable. But as a consumer Liz wants to explore what needs to be done to turn off the plastic tap at the source. Why is only 11% of plastic recycled globally? Why are billions of dollars still being invested in new plastic factories around the world? How does plastic in our food web affect human health?

Liz Bonnin is an Irish science, wildlife and natural history presenter, who has worked on television in both Ireland and the United Kingdom. She is also a biochemist and Wild Animal Biologist. She is best known for presenting wildlife and science programmes including Galapagos, How the Earth Works, Stargazing Live and Should We Close Our 700s?

NORTH WEST EVENTS

PROGRAMMED IN PARTNERSHIP WITH THE NERVE CENTRE









Duff Balloons Mega Sculpture

DATE Ongoing Thurs 14 – Sun 24 February	тіме(s) 9.00am – 6.00pm			
VENUE Foyleside Shopping Centre, Derry/Londonderry BT48 6X		suit- ABILITY AII Ages		
admission & воокіng Free. Drop in				

Ryan Tracey and Darren Mortiboy have been building balloon sculptures for television shows and large events for a number of years. Ryan is the fastest balloon modeller in the world and Darren is recognised within the industry as one of the greatest balloon sculptors in the world. On Blue Peter they built a 20 ft hot air balloon mega sculpture out of balloons.

Last year Ryan and Darren built a 14ft Balloon Astronaut with over 300 modelling balloons. This year they are going bigger and better - but what will it be?? Come along and watch this mega sculpture being built - it will be out of this world! The build is happening in Foyleside Shopping Centre and will begin on Tuesday 12th February from 09:00am.





Coming Home: Art and the Great Hunger

Ongoing Jan – March 2019	am – 5.00pm ay to Saturday
VENUE Cultúrlann Uí Chanáin, 37 Gre James Street, Derry BT48 7D	suitability All Ages

Exhibition: Free. Drop in

Guided tours: £2. Booking via eolas@culturlann.org

The world's largest collection of famine-related art, by noted Irish and Irish-American artists, has come to Ireland for the very first time. Fifty artworks, on loan from Ireland's Great Hunger Museum, at Quinnipiac University, offer an incomparable direct link to the past, making it an important gesture of cultural reconnection.

No part of the country, no religious group escaped the famine – it was the migration crisis of the 19th century. The impact of the Great Hunger (1845-52) is still with us. It has shaped our history, our landscape, our politics, our culture and our character. For these reasons each new generation should know the scale of the Famine, the horror of it, and how it permeated everything.







SCIENCE COMMUNICATION

Game of Thrones Landscape Tour

DATE Friday 15 February	тіме(s) 9.30a	m – 3.30pm
VENUE Ulster University, Coleraine campus (Meeting point: Base of the Podium Steps - Main entrance)		suitability 18+
ADMISSION & BOOKING £8. Book via nisciencefestival.co	m	

Winter is coming to the spectacular North Coast! Join us on a tour of Westeros and learn more about the environmental processes and history which helped create some of the most iconic landscapes in Game of Thrones. Led by staff at the School of Geography and Environmental Sciences at Ulster University, we ride north (and south) to the House of Greyjoy, the Iron Islands, Kingsroad and the Coast of Dorne. At each stop we will experience the magical landscape of the famous TV series, as well as having some handson activities that will show you what it's like to be a scientist out in the field. Pub lunch and plenty of photo opportunities are included in the tour.



NATURAL WORLD

Science, Snakes and Spiders (OH MY!)

Saturday 16 February	10.00	am – 5.00pm
VENUE Foyleside Shopping Centre, 19 Orchard St, Derry/Londonderry BT48 6XY		SUITABILITY All Ages
admission&воокіng Free. Drop In Event.		

Mantella Environmental Education provide Interactive Animal Encounters, talks and displays, which bring people up close and personal with the natural world by allowing them to meet our incredible animal ambassadors. Learn about the adaptations of each animal, where they live, the threats they face, and why each is so important in our environment. Our interactive approach to learning greatly helps people of all ages and levels of ability to understand and appreciate the natural sciences and stimulate a lifelong interest in science in the next generation!





DATE

Saturday 16 February

VENUE

Nerve Centre, 6-8 Magazine St, Londonderry BT48 6HJ

The S-Team Takeover Initiative is a pilot event for the 2019 Festival as part of the Year of Youth. Through this initiative, a team of young people (aged 16 – 24) were tasked with curating an entire day of Science Festival activity. The scheme provides young people with skills in science and event management, helping them to gain confidence, team building and management skills. There are 3 events happening as part of this initiative







SCIENCE COMMUNICATION

Slime School

TIME(S

10.00am – 12.00pm (autism friendly show) & 1.00 – 3.00pm (public)

SUITABILITY

5+

ADMISSION & BOOKING

£3 per child/£5 for two (Parents go free). Book via nisciencefestival.com

Join our mad scientists to make your own Flubber & magnetic slime at this slimetastic event before watching everyone's favourite slime, Flubber (U). All participants will receive a Slime School Certificate and get to take their crazy creations home! If you're brave enough to come dressed as a mad professor yourself, we'll give a prize for the craziest hair style of the day!

Children must be accompanied by an adult at all times.







The Art & Science of SFX make up

TIME(S)

2.00 - 3.00pm & 4.00 - 5.00pm

SUITABILITY

12-16 (Contains blood & gore)

ADMISSION & BOOKING

£5. Book via nisciencefestival.com

Join us to learn the secrets behind the best special effects (SFX) make up! Participants will learn how to create two, different special effects looks in this practical workshop which focuses on different body parts, allowing you to create realistic wounds and injuries from your favourite movies. Prizes for the best recreation on the day!

Warning: Contains blood & gore



SPACE

Trapped in Space/ Night of Aliens

7.00 - 10.00pm

SUITABILITY

ADMISSION € BOOKING

£6. Book via nisciencefestival.com

Join our special guest scientist and film fan, Dr Declan McKenna, as he explains the tricks which horror film directors use to frighten us, while also exploring the science behind the emotional and psychological responses we experience when we watch a scary movie.

The talk is followed by a screening of the acclaimed "scariest movie ever", Ridley Scott's 'Alien' (1979), a MUST see on the big screen.

A free 'Out of this World' cocktail / mocktail is included on arrival.







Dart Mountain Cheese Tour

 DATE Saturday 16 February	тіме(s) 12.00 – 1.00pm	
VENUE Tamnagh Road Park, Claudy BT47 4DN	nagh Road Park, Claudy, Co. Derry 7 4DN	
 ADMISSION & BOOKING	al com	

Dart Mountain Cheese, nestled in the Sperrin Mountains, quietly work away making a range of award-winning cheese.

We invite you to our cheese making shed to learn where and how the cheeses are made. You will discover the science involved in turning liquid milk into solid cheese. The role of bacteria, yeasts, enzymes and moulds in shaping the flavour, appearance and texture of cheese will be discussed and the visit will conclude with a tasting of our family of cheeses.



The Science of Balloons

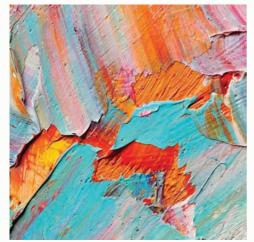
DATE Saturday 16 February	тіме(s) 2.00 – 3.00pm	
VENUE Foyleside Shopping Centre, 1 Orchard St, Derry/Londonder BT48 6XY	lue lyleside Shopping Centre, 19 chard St, Derry/Londonderry	
ADMISSION & BOOKING Free. Drop in.		

Ryan Tracey is the world's fastest balloon modeller with 3 Guinness World Records under his belt. Having mastered the art of speed balloon modelling, he has made many appearances on tv including Britain's Got Talent, Blue Peter, Ninja Warrior UK and CBBC's Officially Amazing.

Join Ryan for this drop-in workshop to understand the intricacies of balloon modelling and how his background in technology and design has helped him decipher this unusual art.

Ryan will also be making a new attempt to beat his own Guinness World Record for the fastest time to model 5 balloon sculptures whilst blindfolded!







ART & SCIENCE

Physics of Paint

DATE Saturday 16 February	TIME(S) 2.00 -	- 3.00pm
VENUE Nerve Centre, 6-8 Magazine St, Derry/Londonderry BT48 6HJ		suitability 5 Yrs+
ADMISSION & BOOKING £3. Book via nisciencefestival.co	m	

Explore the physics of paint in this hands-on workshop with Dr Anne Pawsey. Examine the ingredients in different paints, then experiment with changing textures to produce a variety of effects. Finally, we will use physical principals to produce our own art work. This workshop is hands on, aprons will be provided - but don't wear your best clothes.

FOOD FOR THOUGH

Physics of Gin

DATE Saturday 16 February	TIME(S) 8.00 -	- 11.00pm
VENUE Nerve Centre, 6-8 Magazine St, Londonderry BT48 6HJ		SUITABILITY 18+
адміssion & воокімс £10. Book via nisciencefestival.c	om	

Physicist Dr Anne Pawsey returns for a handson exploration of the physics behind the world's current favourite spirit, gin. This interactive workshop will explain the physics of alcohol, the influence of ice, and what actually happens when you shake a Martini. The rules on drinking in the laboratory may be relaxed. Music provided 9.30 – 11.00pm by Blood (Hutton sisters).

*Have dinner in Mekong before the show and receive 10% off your bill when you present your ticket, booking essential.







About Time

DATE Saturday 16 February	тіме(s) 8.00 — 9.30рі	m
VENUE Echo Echo Dance Theatre C Waterloo House, Hangman' Magazine Street, Derry-Lon BT48 6HH	e Theatre Company, , Hangman's Bastion,	
ADMISSION & BOOKING £8 / £5 concession. Book via nisciencefestival.com		

What if time did not really pass or flow? If there was no real difference between the past and the future? If 'now' were just a matter of where you happen to be, like 'here'? How can we square our day-to-day experience of time with these incredible claims made by leading physicists? Theatre, dance, psychology and philosophy combine forces to grapple with the puzzle of time, introduced by experts Professor Christoph Hoerl (University of Warwick) and Professor Teresa McCormack (Queen's University Belfast). Artists from the Big Telly Theatre Company (Portstewart), BBeyond Performance Art (Belfast), and Echo Echo Dance Theatre Company (Derry-Londonderry) will explore what it means to exist and do things in a time-bound world.

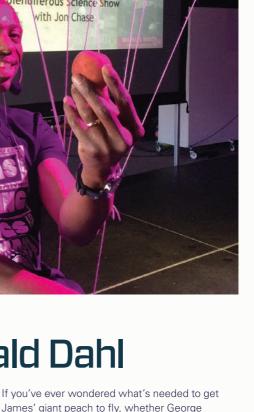


Strabane Science Safari

	DATE Sunday 17 February	TIME(S) 12.00 – 1.00pm (autism friendly), 1.00 – 3.00pm (general)	
	VENUE Alley Theatre, Railway BT82 8EF	St, Strabane	suitability 5 Yrs+
	admission & воокіng Free, Drop in.		

NI Science Festival brings you fun filled day of workshops and activities designed to introduce all the family to the wonderful world of science and technology. Get up close and personal with weird and wonderful animals from around the world. learn about the wonders of nature, the human body and get hands on with the latest technology and become a scientist for a day!







SCIENCE COMMUNICATION

Science of Roald Dahl

Sunday 17 February

12.00 - 1.00pm (Nerve Centre) & 3.30 - 4.30pm (Alley Theatre)

SUITABILITY

7 Yrs+

Nerve Centre, 6-8 Magazine St, Derry/Londonderry BT48 6HJ (12.00pm) & Alley Theatre, Railway St, Strabane BT82 8EF (3.30pm)

ADMISSION & BOOKING

£6. Book via nisciencefestival.com

James' giant peach to fly, whether George is really a genius scientist, or just how topsy turvy the Twits could really be, then this is the splendiferous science show for you. Join BBC Bitesize science presenter Jon Chase as he delves into the whoopsy waffling worlds of



Roald Dahl.







SciMath Interactive Workshops

Monday 18 – Saturday 23 Ferbruary	TIME(S) Hourly from 10.00am – 3.00pm	
VENUE Academy for International S Research, 71 Clarendon stre Londonderry, BT48 7ER	h, 71 Clarendon street, Derry/	
ADMISSION & BOOKING £12. Book via nisciencefesti	val.com	

Come and participate in our fun, interactive SCIMATH workshops, which will help develop your critical thinking skills. These 45-minute maths and science workshops are aligned with the national curriculum for both primary and secondary school students. Organised by the Academy for International Science & Research.

Kainos Code Camp

Monday 18 & Tuesday 19 February	TIME(S) 10.00	am - 4.00pm
VENUE Nerve Centre, 6-8 Magazine St, Derry/Londonderry BT48 6HJ		suitability 14 – 18 Yrs
ADMISSION & BOOKING Free. Book required via nisciencefestival.com		

Kainos Code Camp is an opportunity for students to learn how to build apps and websites from scratch, take part in interactive sessions with IT geniuses and hear talks on everything from cybercrime to artificial intelligence, gaining an insight into the latest tech.

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SPACE

Look Up with Simon Watt

DATE Monday 18 February	тіме(s) 12.00-1.00pn	n
VENUE Nerve Centre, 6-8 Magazine Londonderry BT48 6HJ		
ADMISSION & BOOKING £6/£3 concession. Book via nisciencefestival.com		

Simon Watt explores some of the science behind space exploration. Which planet is hottest? Which would float in a swimming pool? Which is the most studied? And just how much space is in space? Join him in this live show to see what experiments you can recreate at home and learn about what you can see if you only look up!



MIND & BODY

The Genetics of Superheroes

Monday 18 February 3.00-4.00		pm
VENUE Nerve Centre, 6-8 Magazine St, Londonderry BT48 6HJ		suitability 12 Yrs+
ADMISSION & BOOKING	val com	

TV presenter and scientist, Simon Watt, is returning to Titanic Belfast bringing his 'Cracking The Code: The Genetics of Superheroes' Roadshow! Comic books are filled with mutants; heroes and villains alike, from Wolverine to Magneto, whose special abilities are genetic in their origin. Simon looks into what are real mutants like, looking at topics including genetics, mutation, DNA, and mRNA and poses the question, could we one day use genetics to make us superhuman? Perfect for families who love science and superheroes!







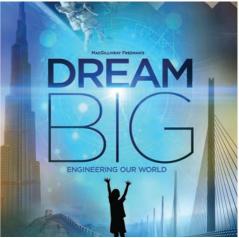
Science of Flavours

DATE Monday 18 February	TIME(S) 12.00	– 2.00pm
VENUE Nerve Centre, 6-8 Magazine St, Derry/Londonderry BT48 6HJ		suitability All ages
ADMISSION & BOOKING		

£5. Book via nisciencefestival.com

Stephen Forbes is the proprietor and head chef of Mekong Street Food, an eatery which offers an array of Asian, Vietnamese and Thai dishes. Stephen will talk about the science behind different flavours and combinations and how they inspire him to design his award-winning dishes. With plenty of tasting samples, join us for this mouth-watering talk and live demonstration of this style of cooking, and pick up some tips on how flavours work together to stimulate our taste buds.





Dream Big

Engineering Our Future

DATE Tuesday 19 February	тіме(s) 11.00 – 12.00pm	
VENUE Omniplex, Quayside Shopping centre, Strand Rd, Derry/Londonderry BT48 7PX		suitability 7 Yrs+
ADMISSION & BOOKING Free. Book via nisciencefestival.com		

Narrated by Academy Award® winner Jeff Bridges, Dream Big: Engineering Our World is a first of its kind film that will transform how we think about engineering. From the Great Wall of China and the world's tallest buildings, to underwater robots, solar cars and smart, sustainable cities, Dream Big celebrates the human ingenuity behind engineering marvels big and small, and reveals the heart that drives engineers to create better lives for people around the world.













MIND & BODY

The Genetics of Superheroes

DATE Tuesday 19 February	TIME(S) 12.00-1.00)pm
VENUE Nerve Centre, 6-8 Magazine St, Londonderry BT48 6HJ		suitability 12 Yrs+
ADMISSION & BOOKING £6/£3 concession. Book via nisciencefestiva		ival.com

TV presenter and scientist, Simon Watt, is returning to Titanic Belfast bringing his 'Cracking The Code: The Genetics of Superheroes' Roadshow! Comic books are filled with mutants; heroes and villains alike, from Wolverine to Magneto, whose special abilities are genetic in their origin. Simon looks into what are real mutants like, looking at topics including genetics, mutation, DNA, and mRNA and poses the question, could we one day use genetics to make us superhuman? Perfect for families who love science and superheroes!



-

Look Up with Simon Watt

Tuesday 19 February 3.00-4.00pm

VENUE
Nerve Centre, 6-8 Magazine St,
Londonderry BT48 6HJ

ADMISSION & BOOKING
£6/£3 concession. Book via nisciencefestival.com

Simon Watt explores some of the science behind space exploration. Which planet is hottest? Which would float in a swimming pool? Which is the most studied? And just how much space is in space? Join him in this live show to see what experiments you can recreate at home and learn about what you can see if you only look up!





Is Autism A Gift?

£5. Book via nisciencefestival.com

DATE Wednesday 20 February	тіме(s) 7.00 -	- 8.00pm
VENUE Nerve Centre, 6-8 Magazine St, Derry/ Londonderry BT48 6HJ		suitability 16 Yrs+
ADMISSION & BOOKING	•	

When we think of autism we usually think of challenges and deficits but recently, we have started to understand that there are also many strengths linked to autism. This talk explores the idea that 'different' doesn't mean 'worse' and looks at situations where autistic people are better than non-autistic people: not just the rare savants with superpowers, but unique skills that many autistic people have. We will delve into some of the science behind special abilities and talents in autism and consider ways in which autistic people are using their skills to help push society forwards in new and exciting ways.





SCIENCE & SOCIETY

Was the Great Irish Famine an Ecological Disaster?

DATE Wednesday 20 February	/ednesday 20 February 7.30 – 8.30	
ADMISSION & BOOKING £3. Book via nisciencefestival.com		

The proximate cause of the Great Irish Famine of 1846-50 was a potato blight that affected most of Western Europe. Why was the blight's impact so severe in Ireland, but not elsewhere? Join Dr. Alan Fernihough, lecturer in economics at Queen's Belfast, to hear about his ongoing research on "The Causes and Consequences of the Great Irish Famine". Using Geographical Information System (GIS) data and statistical analyses, this lecture will touch on age-old questions such as what made Ireland so vulnerable to blight, and could more have been done to alleviate famine hunger and disease.









SCIENCE COMMUNICATION

Foyle Science Showcase

	Saturday 23 February	aturday 23 10.00 – 11.00am (Autism Friendly Hour) 11.00am - 5.00pm (General) AUE byle Arena, 2 Limavady Rd, erry/Londonderry BT47	
	VENUE Foyle Arena, 2 Limavac Derry/Londonderry BT4 6JY		
ADMISSION & BOOKING Free. Book via nisciencefestival.com			al.com

The Foyle Science Showcase returns to the Foyle Arena for the third year with a variety of fun, interactive mini-events designed to introduce young people to the wonderful world of science and technology. We have several shows running across the day, including Scientific Sue, Ken Farquhar and Ryan Tracey (Duff Balloons).

Relax beneath the mobile planetarium whilst discovering the wonders of the solar system, or get up close and personal with some weird and wonderful animals from across the world.

Join is in some of the many workshops on offer where you can discover the wonders of nature, the human body, food, psychology and technology such as robots and raspberry pi.

Sponsored by Derry City & Strabane District Council with support from the Nerve Centre.







SCIENCE COMMUNICATION

STEM Storytime

DATE Saturday 16 & Saturday 23 February	тіме(s) 2.00 – 3.00pm	
VENUE Coleraine Library, Unit 19, Diamond Centre, Bridge Street, Coleraine, BT52 1DT		SUITABILITY 4 – 8 Yrs & Parents/ Guardians
admission & воокіng Free. No booking required.		

Join a STEM ambassador for a story time event in the library during the NI Science Festival. Children will be treated to a selection of stories to discover science in a fun way! The books chosen will spark excitement, teach something new and make STEM accessible to children.

Saturday 16 February - Jordan Jones (Software Engineer, LIT)

Saturday 23 February - Vicki McAfee (Dentist) & Tamsyn Redpath (PhD student, UU)





SCIENCE COMMUNICATION

Maddie's Fantastic Factory Tour!

Saturday 23 February	TIME(S) 10.00 – 11.00am & 12.00 – 1.00pm	
Derry/ Londonderry BT48 6HJ		SUITABILITY 6 Yrs+ & Parents/ Guardians
ADMISSION & BOOKING £8 / £6. Book via nisciencefestival.c		1

Welcome one and all, Maddie is opening the doors to her fantastic factory for the very first time!

Maddie is always busy exploring factories on telly and YouTube but now she's inviting you all to join her own tour and marvel at the machines inside! Come along and find out how some of her favourite things are made live on stage, with a little help from her special cameras.

"In your most curious of dreams you could not imagine the discoveries that await you!"







ľ	DATE Saturday 23 February	тіме(s) 12.00 – 1.00pm		
	VENUE Strabane Library, 1 Railway St, Strabane BT82 8EF		suitability 8 Yrs+	
ľ	ADMISSION & BOOKING £5. Book via nisciencefestival.com			

Dr Michael Leach is a full-time wildlife author and photographer. He has also worked extensively in television as a wildlife cameraman on more than 100 TV documentaries for both the BBC and ITV His work with animals has taken him all around the world and has included working with gorillas in central Africa, polar bears in the Arctic, sharks circling the Galapagos Islands and lions in Africa. Hear Michael talk about his travels and, in particular, his time living and communicating with the mountain gorillas of Rwanda, the gentle, intelligent primates that we have pushed to the edge of extinction and how he used this experience to write his book The Great Apes -Faces in Nature's Mirror.



In the Midst of Gorillas Deep Ocean Lab with Greg Foot

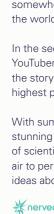
Saturday 23 February	rurday 23 February 2.00 – 3.00pm JE rve Centre, 6-8 Magazine St, 10 Yrs+		
VENUE Nerve Centre, 6-8 Magazin Derry/ Londonderry BT48 6			
ADMISSION & BOOKING f8/f6 concession. Book via nisciencefestival.com			

What happens as you dive further and further into the deep dark ocean?

Join Blue Peter science presenter and YouTuber Greg Foot for the story of his scientific adventure to the deep.

With experiments and stunning videos, Greg will show you the high-tech submersibles that took him down a crazy 1.000ft into the Twilight Zone. He'll explain the importance of our oceans, and thanks to Greg's work with the Blue Planet II team - uncover the effect we're having on them.









Everest Lab The Science of High Altitude with Greg Foot

DATE Saturday 23 February	тіме(s) 4.00 – 5.00pm	
VENUE Nerve Centre, 6-8 Magazine St, Derry/ Londonderry BT48 6HJ		suitability 10 Yrs+
ADMISSION & BOOKING £8 / £6 concession. Book via nisciencefestival.com		

What happens to your body when you push it somewhere it's not built to go - to the top of the world?

In the second of his NI Science Festival talks, join YouTuber & Blue Peter science guy Greg Foot for the story of his scientific adventure to the world's highest pop-up lab at Everest Base Camp.

With summit kit, interactive experiments, and stunning videos, Greg will uncover how a group of scientists and medics braved the thin, freezing air to perform cutting edge research that turns our ideas about medicine upside down.





Why Do Guitars Taste of Hops?

DATE Saturday 23 February	тіме(s) 8.00 - 11.00pm	١
VENUE Nerve Centre, 6-8 Magazine St, Derry/ Londonderry BT48 6HJ		SUITABILITY 18+
ADMISSION & BOOKING £15. Book via nisciencefestival.com		

Your brain is lying to you. You have more than five senses. And you can hear the difference between IPA and stout. Pete Brown has been running experimental beer tastings, pairing top tunes and beers for six years. This talk is a mixture of fandom, humour, and genuine neuro-scientific research. Think it sounds like nonsense? Come along to the Nerve Centre and have your senses challenged. If you're wrong, you'll at least taste some great beers. If you're wrong, you just might taste them like you never have before. Music provided by Ard Ri.

*Have dinner in Mekong before the show and receive 10% off your bill when you present your ticket, booking essential.









SCIENCE COMMUNICATION

Horrible Science with Nick Arnold

Book via nisciencefestival.com

DATE Sunday 24 February	TIME(S) 12.00-	-1.00pm & 2.00 – 3.00pm
VENUE Nerve Centre, 6-8 Magazine St, Londonderry BT48 6HJ		SUITABILITY 7 Yrs+
ADMISSION & BOOKING £6 each or £20 for family of 4 (2 adults & 2 children).		

Nick Arnold is the bestselling children's author of the Horrible Science Books which have been amazing children for more than 20 years. Nick has presented his Horrible Science Show at festivals, in schools and in libraries all over the world to audiences both young and old. This high-energy interactive show brings the Horrible Science books to life using humour, experiments, activities and competitions. It's loud, it's funny – and guaranteed to please.



NATURAL WORLD

The Rise and Fall of the Dinosaurs

Sunday 24 February	2.00 -	- 3.00pm
VENUE Nerve Centre, 6-8 Magazine St, Derry/Londonderry BT48 6HJ		SUITABILITY 11 Yrs+
ADMISSION & BOOKING £6 / £3 Book via nisciencefestiva	al.com	

Based around his acclaimed book, The Rise and Fall of the Dinosaurs: The Untold Story of a Lost World (The Times Science Book of the Year 2018), leading palaeontologist and evolutionary biologist Steve Brusatte shows how these remarkable creatures created a 150-million-year empire that saw human-size tyrannosaurs, carnivores even larger than a T. Rex and feathered raptors. He describes a real and even more fascinating Jurassic world.

A major re-evaluation of the creatures that ruled the earth for 150 million years by one of the world's leading palaeontologists. Using fossil clues gathered with new technology, Brusatte traces these magnificent creatures from their evolution in the Triassic period, through the Jurassic to their final catastrophic days in the Cretaceous. Discover what it means to be a dinosaur hunter. This is the thrilling untold story of a lost world.



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SCIENCE THROUGH THE BRITISH COUNCIL

There are many international opportunities in science for individuals and organisations through the British Council. We link scientists globally, encourage grassroots discussion and promote science in education.

Our work in public engagement includes FameLab, a competition which showcases upcoming talent in science communication and engages the public.

In higher education, the IAESTE programme provides STEM students with international, paid work experience. It also provides employers with access to highly skilled students from over 80 countries. In addition, science and innovation partnerships are developed under The Newton Fund, to promote the economic development and welfare of people in partnering countries and beyond.

Schools can also get involved in international science work through partnerships and staff mobility in programmes like eTwinning, Erasmus+ and Connecting Classrooms.







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WORK EXPERIENCE

Can your organisation provide STEM related work placements?

There is a pressing need for STEM related experiences of work for pupils across Northern Ireland. If you can participate please register your opportunity on Connect To Success at www.nibusinessinfo.co.uk/connect-to-success or call 0300 200 7876.

THURSDAY 14 FEBRUARY (Pages 16-21)

HMS Caroline: Maritime Babies	HMS Caroline, Belfast	10.30am	Art & Science
The Science of Attraction	Lush, Belfast	6.00pm	Mind & Body
Blue Planet II: the science behind the BBC series	BBC Blackstaff, Belfast	6.00pm	Natural World
Al: Past, Present and Future	Ulster Museum, Belfast	6.30pm	Tech & Digital
Rosalind Franklin, Barack Obama and the Irish Twists in the DNA Tale	Graduate School, QUB	7.00pm	Science in Society
Moon: Art, Science & Culture	Crescent Arts Centre, Belfast	7.00pm	Art & Science
Star Struck	Ashby Building QUB, Belfast	7.00pm	Space
When Something Happens	Armagh Observatory and Planetarium	7.00pm	Maths & Physics
Evil: The Science behind Humanity's dark side with Julia Shaw	Crumlin Road Gaol, Belfast	7.30pm	Mind & Body
Hearing Your Genes Evolve	Sonic Arts Research Centre, QUB	8.00pm	Mind & Body
Anatomy Nights – Heart Dissection Live	Black Box, Belfast	8.00pm	Mind & Body

FRIDAY 15 FEBRUARY (Pages 22-25)

Baby Sensory Science	Ormeau Baths, Belfast	10.00am & 11.00am	Mind & Body
Learning from Belfast Primark Fire	Ulster University, Jordanstown	10.00am	Science Communication
How to Build a Human	Ulster Museum, Belfast	1.00pm	Mind & Body
UV Yoga	Crescent Arts Centre, Belfast	5.30pm & 7.00pm	Mind & Body
Physics of Gin	Bullit Hotel, Belfast	7.30pm	Food for Thought
One of us is a Robot	Strand Arts Centre	8.00pm	Tech & Digital
Professor Brian Cox - Universal	SSE Arena	8.00pm	Maths & Physics

SATURDAY 16 FEBRUARY (Pages 27-37)

The Heart Experience	St. Georges Market, Belfast	9.00am	Mind & Body
Dye Tracing Experiment at Marble Arch Caves	Marble Arch Caves, Enniskillen	10.00am & 1.00pm	Earth & Elements
Engaged Citizenship Ecology (B-beyond art piece) (also on Saturday 23 February)	Ulster Museum, Belfast	10.00am	Art & Science
Mathematical art and the secrets of the Giant's Causeway	The Open University, Belfast	10.00am	Maths & Physics

Northern Ireland Raspberry Jam	School of Maths and Physics, QUB	1.00pm	Tech & Digital
Centre for Cancer Research and Cell Biology Public Open Day	Centre for Cancer Research and Cell Biology, QUB	10.30am & 12.30pm	Science Communication
TQ Giant Explorers Trail	Titanic House, Belfast	10.30am	Science in Society
Our Resourceful Ocean (also on 17, 23, 24 February)	Exploris Aquarium	10.30am	Natural World
North Coast Seaside Forage Walk	Ballintoy Harbour, Ballintoy	10.30am	Food for Thought
Pineapple Mania at Hillsborough Castle	The Courthouse, Hillsborough Castle	11.00am	Food for Thought
Science of Human Milk	The MAC, Belfast	11.00am	Mind & Body
Nico & Martin present SPACE	Black Box, Belfast	11.00am & 1.00pm	Art & Science
Digby - the biggest dog in the world	Strand Arts Centre, Belfast	12.00pm (Film) 1.45pm (Workshop)	Natural World
Is Distilling Whiskey a Science or an Art? (also on Saturday 23 February)	Rademon Estate Distillery, Downpatrick	12.30pm	Art & Science
The Science of Roald Dahl	Ulster Museum, Belfast	1.00pm & 3.00pm	Science Communication
Know Your Enemy: Disease- Focussed Research at Queen's University	Wellcome-Wolfson Inst for Experimental Medicene, QUB	1.00pm	Mind & Body
Meteorites: How Space Rocks Inspired a Space Craft	Ulster Folk & Transport Museum, Holywood	1.00pm	Space
Design- your-own-osaurus	The Boulevard, Banbridge	1.45pm & 3.00pm	Art & Science
Why NI doesn't breastfeed	The MAC, Belfast	2.00pm	Mind & Body
Look Up by Simon Watt	Titanic Belfast	2.00pm	Space
The Anatomy of Singing	Music Building, QUB	2.00pm	Art & Science
Spots and Butterflies on the Sun: Annie Maunder, Solar Astronomer	Old Museum Building, Belfast	2.15pm	Maths & Physics
W5 Late	W5, Belfast	7.00pm	Mind & Body
SUNDAY 17 FEBRUARY (Pa	ages 38-43)		

SUNDAY 17 FEBRUARY (Pages 38-43)

Mapping Penguins	Elmwood Building, QUB	10.00am	Natural World
Early Explorers Access Morning at HMS Caroline	HMS Caroline, Belfast	10.00am	Art & Science

The Moon: a gateway to planetary exploration	Ulster Museum, Belfast	11.00am	Space
What's the Frequency, Giuseppe?	Black Box, Belfast	1.00pm	Art & Science
Inventing Ourselves: the secret life of the Teenage Brain with Sarah Jayne Blakemore	Waterfront Hall, Belfast	1.00pm	Mind & Body
Natural Selection Soapbox	Ulster Museum, Belfast	1.30pm	Natural World
When Dinosaurs Were Sick	Elmwood QUB	2.00pm	Natural World
Digital Feelings	Black Box, Belfast	3.00pm	Engineering & Robotics
Big Cats: Past, Present, Future?	Ulster Museum, Belfast	4.00pm	Natural World
Neuromusiclogy	Black Box, Belfast	4.00pm	Art & Science
FRIGHT NIGHT! The Science of Horror Movies	Black Box, Belfast	7.00pm	Science Communication
MONDAY 18 FEBRUARY (F	ages 44-48)		
Dino DNA	Black Box, Belfast	10.00am	Art & Science
Science Starz Workshops	Various	11.00am	Art & Science
Lego Trail at HMS Caroline (also on Tuesday 19 February)	HMS Caroline	11.00am	Art & Science
Little Professors	Armagh Observatory and Planetarium	11.00am	Space
A Winter Tree Trail in Botanic Gardens	Botanic Gardens, Belfast	11.00am	Natural World
Girls Takeover at the Observatory and Planetarium	Armagh Observatory and Planetarium	1.00pm	Science Communication
Clean Transport & Smart Materials	Malone House, Barnett Demesne, Belfast	6.30pm	Engineering & Robotics
Smart Materials with Dr Anna Ploszajski	The MAC, Belfast	6.30pm	Tech & Digital
First Contact: Our First Visitor From Another Star	Larmour Lecture Theatre, QUB	7.00pm	Space
Understanding Suicide	Check Website For Details	7.00pm	Mind & Body
MENSA Magnificent Monday Quiz	Black Box, Belfast	7.30pm	Science Communication
TUESDAY 19 FEBRUARY (Pages 49-54)			
Build a Booster Backpack	Black Box, Belfast	10.00am	Art & Science
Finding Planet B	Armagh Observatory and	11.00am	Science in Society

Build a Booster Backpack	Black Box, Belfast	10.00am	Art & Science
Finding Planet B	Armagh Observatory and Planetarium	11.00am	Science in Society
Dream Big: Engineering Our World	Dundonald, Dungannon & Derry Ominplexes	11.00am	Engineering & Robotics
Alien Autopsy (until Thursday 21 February)	W5, Belfast	12.00pm	Space

ANCE GO	IDE	
Ulster Museum, Belfast	2.00pm	Natural World
Crescent Arts centre	6.00pm	Science in Society
Elmwood Building, QUB	5.30pm	Natural World
Graduate School, QUB	7.00pm	Science in Society
Armagh Observatory and Planetarium	7.00pm	Science Communication
Black Box, Belfast	7.30pm	Mind & Body
The MAC, Belfast	7.45pm	Mind & Body
RY (Pages 55-60)		
Silent Valley Mountain Park, Newry	11.00am	Science in Society
Armagh Observatory and Planetarium	11.00am	Science Communication
Silent Valley Mountain Park, Newry	11.30am	Engineering & Robotics
Tropical Ravine, Botanic Gardens, Belfast	1.00pm	Natural World
Black Box, Belfast	5.30pm	Engineering & Robotics
Cresent Arts Centre, Belfast	6.00pm	Mind & Body
David Keir Building, QUB	6.00pm	Tech & Digital
Sunflower Public House, Belfast	6.30pm	Mind & Body
The MAC, Belfast	7.00pm	Earth & Elements
Graduate School, QUB	7.00pm	Science in Society
	Ulster Museum, Belfast Crescent Arts centre Elmwood Building, QUB Graduate School, QUB Armagh Observatory and Planetarium Black Box, Belfast The MAC, Belfast RY (Pages 55-60) Silent Valley Mountain Park, Newry Armagh Observatory and Planetarium Silent Valley Mountain Park, Newry Tropical Ravine, Botanic Gardens, Belfast Black Box, Belfast Cresent Arts Centre, Belfast David Keir Building, QUB Sunflower Public House, Belfast The MAC, Belfast	Crescent Arts centre 6.00pm Elmwood Building, QUB 5.30pm Graduate School, QUB 7.00pm Armagh Observatory and Planetarium Black Box, Belfast 7.45pm RY (Pages 55-60) Silent Valley Mountain Park, Newry 11.00am Armagh Observatory and Planetarium Silent Valley Mountain Park, Newry 11.30am Tropical Ravine, Botanic Gardens, Belfast 5.30pm Cresent Arts Centre, Belfast 6.00pm David Keir Building, QUB 6.00pm Sunflower Public House, Belfast 6.30pm The MAC, Belfast 7.00pm

THURSDAY 21 FEBRUARY (Pages 60-65)

The Basics of Plant Identification	Botanic Gardens, Belfast	12.30pm	Natural World
The Dome Show Mystery	Armagh Observatory and Planetarium	1.00pm, 2.00pm & 4.00pm	Space
BBC Make It Super Assembly	Live Stream	2.00pm	Tech & Digital
Let's Talk Genetics - Rare Diseases in Northern Irelands	Crescent Arts Centre, Belfast	5.30pm	Tech & Digital

Ulster Museum, Belfast

Turing Lecture 2019 Engineering a Fair Future: Why We Need to Train Unbiased Al	Assembly Rooms, Belfast	6.00pm	Mind & Body
Jack Kerr Memorial Lecture - Society: Past, Present & Future with Dr Jago Cooper	Ulster Museum, Belfast	6.30pm	Science in Society
The Food, The Bad and The Ugly	Ulster University, Belfast	7.00pm	Science in Society
In the Midst of Gorillas	Lisburn City Library	7.00pm	Natural World
Control your thinking on the putting green	Ulster University, Belfast	7.00pm	Sport Science
Is Autism A Gift?	Crescent Arts Centre	7.30pm	Mind & Body
FRIDAY 22 FEBRUARY (Pa	ges 65-71)		
Thinking In Time – The Developmental Psychology of Future Thinking	David Keir Building, QUB	10.00am	Mind & Body
What Wood is That?	Botanic Gardens, Belfast	11.00am	Natural World
Inside Out	W5, Belfast	12.00pm & 3.00pm	Mind & Body
The People Vs. Tech: How The Internet Is Killing Democracy (and how we save it)	Crescent Arts Centre, Belfast	1.00pm	Tech & Digital
Belfast's Forgotten Medical History Walking Tour	Belfast City Centre	4.00pm	Mind & Body
Art X Science Showcase	Ulster Univeristy, Belfast	5.30pm	Art & Science
Cosmic Cuilcagh	Marble Arch Caves, Enniskillen	6.30pm	Space
LaTe LaB	Ulster Folk and Transport Museum, Holywood	6.30pm	Science Communication
Planetarium After Dark	Armagh Observatory and Planetarium	7.00pm	Space
Suspect Confessions	Crumlin Road Gaol, Belfast	7.30pm	Science in Society
Why do Guitars taste of Hops?	Black Box, Belfast	8.00pm	Food for Thought
Joel.M – Prediction, Process and Pronouncement	Strand Arts Centre, Belfast	8.00pm	Mind & Body
SATURDAY 23 FEBRUARY	(Pages 71-83)		
Fly on the Wall	Lanyon Place Station, Belfast	9.00am	Art & Science
Time-travelling in a Northern Ireland Bog	Various	9.15am	Natural World
Science on Screen	St. Georges Market, Belfast	10.00am	Science Communication
Create with Claude	Sixteen South Studios, Belfast	10.00am & 12.00pm	Art & Science
Controlling your ISO Noise	Belfast Exposed	10.00am	Art & Science
Belfast on the Brink	Medical Biology Centre, QUB	10.00am	Science in Society

The Greatest Inequality in Maths: Acknowledgement of Female Success	Old Museum Building, Belfast	10.00am	Maths & Physics
Physics Busking	Ulster Folk & Transport Museum, Holywood	10.00am	Maths & Physics
Titanic Taster Photography Tour	Titanic Belfast	10.30am	Art & Science
Immersive Technologies	Sonic Arts Research Centre, QUB	11.00am	Tech & Digital
Horrible Science	Black Box, Belfast	11.00am & 1.00pm	Science Communication
Taking a closer look at the rocks under our feet (also on Sunday 24 February)	W5, Belfast	Various	Earth & Elements
Ask Us Anything	Ulster University, Belfast	11.30am	Science Communication
Muppets from Space (1999)	Strand Arts Centre, Belfast	12.00pm	Space
Our Violent Earth	Slieve Gullion Courtyard & Forest Park, Newry	12.00pm	Natural World
Meet Dino-Doc!	Elmwood Building, QUB	1.00pm	Natural World
Queen's Archaeology Hidden Treasures	Archaeology & Palaeoecology Centre, QUB	2.00pm	Natural World
Superheroes: When Science Meets Sci-Fi	Ulster University, Belfast	3.00pm	Science in Society
The Science of Immersive Sound	Sonic Arts Research Centre, QUB	3.00pm	Tech & Digital
The Rise and Fall of the Dinosaurs	Ulster Museum, Belfast	3.00pm	Natural World
The Laughter Factory	David Keir Building, QUB	3.30pm	Mind &Body
NE0 NE0 #7	Black Box, Belfast	8.30pm	Art & Science
SUNDAY 24 FEBRUARY (P	ages 83-88)		
The Galapagos - Evolution and Global Change	Medical Biology Centre, QUB	12.30pm	Natural World
Wild Weather, Physics and Climate Change	Whitla Hall, QUB	1.00pm	Mind & Body
Deep Ocean Lab with Greg foot	Ulster Museum, Belfast	1.00pm	Natural World
Maddie's Fantastic Factory Tour!	The MAC, Belfast	1.00pm & 3.00pm	Science Communication
The Science of Bathing	Lush, Belfast	2.00pm	Mind & Body

Everest Lab – The Science of High Altitude with Greg Foot	Ulster Museum, Belfast	3.00pm	Natural World
Gut Health Goes Global	Black Box, Belfast	3.00pm	Food for Thought
Drowning in Plastic – Liz Bonnin	Whitla Hall, QUB	4.00pm	Science in Society
ONGOING EVENTS (Pages	5-15)		
NISciFest Roadshow	Various	10.00am & 2.00pm	Science Communication
Beers & Careers	Ormeau Baths, Belfast Gallery	7.00pm	Science in Society
Leonardo 500	Ulster Museum, Belfast	10.00am	Art & Science
Gaia	W5, Belfast	10.00am	Space
Lasers Live	Ulster Museum, Belfast	10.00am	Maths & Physics
The Great QR Hunt!	Various	N/A	Tech & Digital
Set the Controls for the Heart of the Sun	Artisann Gallery, Belfast	12.00pm	Art & Science
Emanations from Z - An Exhibition of New Artworks by Colin Reid	Artisann Gallery, Belfast	12.00pm	Art & Science
Vibrant Matter	St. Josephs Church, Sailortown, Belfast	1.00pm	Art & Science
Subject to Change: Loney Abrams and Johnny Stanish	Naughton Gallery, QUB	11.00am	Art & Science
Rocket Launching at Armagh Planetarium	Armagh Observatory and Planetarium	Various	Space
Forest School	Jungle NI, Moneymore	Various	Natural World
Find a sports Star	Various	Various	Sports Science
Soyuz Capsule Exhibition	Ulster Folk and Transport Museum	10:00am	Space
STEM Storytime	Various	Various	Science Communication
Home for Insects and	Various	Various	Natural World

AT A GLANCE NORTH WEST EVENTS

FRIDAY 15 FEBRUARY (Page 91)

			· · · · · · · · · · · · · · · · · · ·					
Game of Thrones Landscape Tour	Ulster University, Coleraine	9.30am	Science Communication					
SATURDAY 16 FEBRUARY (Pages 91-96)								
Science, Snakes and Spiders (Oh My!)	Foyleside Shopping Centre, Derry/ Londonderry	10.00am	Natural World					
S-Team Takeover Day	Nerve Centre, Derry/Londonderry	10.00am	Science Communication					
STEM Storytime (also on Saturday 23 February)	Coleraine Library	11.00am	Science Communication					
Dart Mountain Cheese Tour	Tamnagh Road Park, Claudy	12.00pm	Food for Thought					
The Science of Balloons	Foyleside Shopping Centre, Derry/ Londonderry	2.00pm	Art & Science					
Physics of Paint	Nerve Centre, Derry/Londonderry	2.00pm	Art & Science					
Physics of Gin	Nerve Centre, Derry/Londonderry	8.00pm	Food for Thought					
About Time	Echo Echo Dance Theatre Company, Derry/Londonderry	8.00pm	Art & Science					
SUNDAY 17 FEBRUARY (Pages 96-97)								
Strabane SciFari	12.00pm	12.00pm	Science Communication					
Science of Roald Dahl	12.00pm	12.00pm	Science Communication					
Science of Roald Dahl	3.30pm	3.30pm	Science Communication					
MONDAY 18 FEBRUARY (Pages 98-100)								
SciMath Interactive Workshops (runs to Saturday 23 February)	Academy for International Science & Research, Derry/Londonderry	Various	Maths & Physics					
Kainos Code Camp (also on Tuesday 19 February)	Nerve Centre, Derry/Londonderry	10.00am	Tech & Digital					
Science of Flavours with Mekong Street Food	Nerve Centre, Derry/Londonderry	12.00pm	Food for Thought					
Look Up!	Nerve Centre, Derry/Londonderry	12.00pm	Space					
The Genetics of Superheroes	Nerve Centre, Derry/Londonderry	3.00pm	Mind & Body					

AT A GLANCE NORTH WEST EVENTS

TUESDAY 19 FEBRUARY (PAGES 100-101)

Dinosaurs

TUESDAY 19 FEBRUARY (PAGES 100-101)						
Dream Big Engineering Our Future	Omniplex, Quayside Shopping centre	11.00am	Engineering & Robotics			
The Genetics of Superheroes	Nerve Centre, Derry/Londonderry	12.00pm	Mind & Body			
Look Up!	Nerve Centre, Derry/Londonderry	3.00pm	Space			
WEDNESDAY 20 FEBRUARY (Page 102)						
Is Autism A Gift?	Nerve Centre, Derry/Londonderry	7.00pm	Mind & Body			
Was the Great Irish Famine an Ecological Disaster?	Cultúrlann Uí Chanáin, Derry/ Londonderry	7.30pm	Science & Society			
SATURDAY 23 FEBRUARY (Pages 103-106)						
Foyle Science Showcase	Foyle Arena, Derry/Londonderry	Various	Science Communication			
Maddie's Fantastic Factory Tour!	Nerve Centre, Derry/Londonderry	10.00am & 12.00pm	Science Communication			
In the Midst of Gorillas	Strabane Library	12.00pm	Natural world			
Deep Ocean Lab	Nerve Centre, Derry/Londonderry	2.00pm	Natural World			
Everest Lab – The Science of High Altitude	Nerve Centre, Derry/Londonderry	4.00pm	Natural World			
Why Do Guitars Taste of Hops?	Nerve Centre, Derry/Londonderry	8.00pm	Food for thought			
SUNDAY 24 FEBRUARY (Page 107)						
Horrible Science	Nerve Centre, Derry/Londonderry	12.00pm & 2.00pm	Science Communication			
The Rise and Fall of the	Nerve Centre, Derry/Londonderry	2.00pm	Natural World			

NOTES





14-24 FEBRUARY 2019 NISCIENCEFESTIVAL COM