

ATU

Advanced
Technological
Education
Institute

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Fondúireacht Eolaíochta Éireann
Dá bhfuil romhainn
Science Foundation Ireland
For what's next



Human?

12th - 18th November 2023



At a Glance

Sligo Science Festival 2023

12th – 18th November // Part of National Science Week



This year's Sligo Science Festival including the Sligo Science Fair with a peppering of Online events.

For further information on the festival and to book onto **ONLINE** activities at the festival. Go to www.atu.ie/sligosciencefestival

For schools activities please contact our festival producer, Oli Melia – oli.melia@atu.ie

Sunday 12th Nov.

The Sligo Science Fair
ATU Sligo - 12 - 5pm
Family event explaining science in a fun way - Public Event (All Ages)



Monday 13th Nov.

Spin Bots

In Person Workshop with Wonderstruck. 10am. At your Primary School only event (6-7 years)

Professor Plunger

In Person Science Roadshow with the Fanzini Brothers. 10am and 1pm. At your Primary School only event (7-12 years)

Airheads

Science Roadshow with Thunderbolts & Lightening. 10am and 1pm. At your Primary School only event (7-12 years)

Air Powered Rockets

Workshop with Wonderstruck. 1pm. At your Primary School only event (8-12 years)

Mad Professor

Science Roadshow with Mad Professor. 10am & 11.30am. Ballymote Community Library. Primary Schools event (7-12 years)

Wonders of Marine Life

Workshop with Robin Barry. 10am & 11.30am. Sligo Central Library. Primary Schools event (7-12 years)

Pollinator Plan

Workshop with Leif Barry. 10am & 1pm. At your Primary School only event (7-12 years)

What is Menopause?

- ONLINE Talk with Catherine O'Keefe. 7pm. Public Event (12+)

Tuesday 14th Nov.

Spin Bots

In Person Workshop with Wonderstruck. 10am. At your Primary School only event (6-7 years)

Professor Plunger

In Person Science Roadshow with the Fanzini Brothers. 10am and 1pm. At your Primary School only event (7-12 years)

Bugs for Life

Workshop with Thunderbolts & Lightening. 10am & 11.30am. Sligo Central Library. Primary Schools event (7-12 years)

Air Powered Rockets

Workshop with Wonderstruck. 1pm. At your Primary School only event (8-12 years)

Wonders of Marine Life

Workshop with Robin Barry. 10am & 1pm. At your Primary School only event (7-12 years)

Pollinator Plan

Workshop with Leif Barry. 10am & 11.30am. Ballymote Community Library. Primary Schools event (7-12 years)

Unlocking the Potential of Innovation: Bridging Ideas to Real-world Impact

Talk with Prof. Suresh C. Pillai. 7pm. ATU Sligo room A0004. Public Event (12+)

Wednesday 15th Nov.

'BANG' The Science of Special Effects

Science Show with Wonderstruck. 10am. ATU Sligo Hume Hall. Primary School only event (7-12 years)

Airheads

Science Roadshow with Thunderbolts & Lightening. 10am and 1pm. At your Primary School only event (7-12 years)

Amazing Animals

Science Show with Braintastic. 10am. ATU Letterkenny. Primary School only event (7-12 years)

MADLAB

Workshop with Madlab. 10am & 1pm (1.5hrs). Dromore West Community Centre. Primary School only event (7-12 years)

Am I Normal

Science Show with Braintastic. 1pm. ATU Letterkenny. Secondary School only event (12-15 years)

'BANG' The Science of Special Effects

Science Show with Wonderstruck. 6.30pm. ATU Sligo Hume Hall. Public Event (7+ years)

The Heart - from Horses to Apple via Space

Talk with Paul Nolan. 7pm. ATU Sligo room A0004. Public Event (12+)

Thursday 16th Nov.

Fan Powered Cars

Workshop with Wonderstruck. 10am & 1pm. At your Primary School only event (8-12 years)

Amazing Animals

Science Show with Braintastic. 10am. Ballymote Primary School only event (7-12 years)

MADLAB

Workshop with Madlab. 10am & 1pm (1.5hrs). Tubbercurry Community Library. Primary School only event (7-12 years)

Planetary System: A Short Introduction

Talk with Prof. Raymond Pierrehumbert. 11.30am. At your Secondary School only event (14-17 years)

Am I Normal

Science Show with Braintastic. 1pm. Ballymote Secondary School only event (12-15 years)

The Sligo Science Social Featuring Prof. Raymond Pierrehumbert, Blaithin Sweeney & Dr Robin Parmar plus music

Thomas Connolly's Bar, Markievicz Rd, Sligo. 7.00pm

ISTA Senior Science Quiz for Second Level Schools

The annual ISTA science quiz sponsored by AbbVie. ATU Sligo Room A0006. 7.00 pm

Between Ireland and Iceland - Bird Migration Stories

Talk with Jim Wilson. Clayton Hotel 8.00pm. Public Event (All Ages)

Overview of Forensic Autopsy Pathology

In-person Talk with Dr. Paul Hartel, MD. ATU Sligo Room A0005. 8.00pm. Public Event (Age 16+)

Friday 17th Nov.

MADLAB

Workshop with Madlab. 10am & 1pm (1.5hrs). At your Primary School only event (7-12 years)

Planetary System: A Short Introduction

- ONLINE Talk with Prof. Raymond Pierrehumbert. 11.30am. Secondary School only event (14-17 years)

Moonwalking in Sligo

Walk & Learn Event with Northwest Adventure Tours. 8.00pm Slish Woods, Sligo. Public Event (Age 12+)

Saturday 18th Nov.

Kids Who Fell to Earth

- ONLINE Interactive science show. ALL DAY ACCESS. Public Event (All Ages)



All Week

The Sligo Science Trail in city centre shop windows



atu.ie/sligosciencefestival

Sligo Science Fair

SUNDAY 12TH NOVEMBER, 12.00 - 5.00pm

FAMILY EVENT EXPLAINING SCIENCE IN A FUN WAY

The Annual Science Fair at ATU Sligo will include a wide range of performances, interactive displays and demonstrations for all the family to enjoy. Experiments, Discovery and lots of fun guaranteed for both children and adults.



- **Marvellous Macroinvertebrates**
A chance to look at some of the creatures living in the bottom of our lakes and rivers up close, using microscopes.
- **Crime Scene Investigation**
With Anyone 4 Science
Main Concourse All day



Victoria Walker Dance's Chemistry Crew creatively express what it means to be human including the beauty of human connections in a heartwarming dance piece.... Watch as our dancers combine the raw materials of music, movement, space and time to create the must-see event of the Science Fair.

Victoria Walker's Chemistry Crew **The Black Box** 1.00, 2.30 & 4.00pm

Investigate what happens when the worlds of dance and science collide!!

Join our experiment and explore dance in one of our workshops with our professional dance teacher and her "Chemistry Crew". For any budding performers you will also have the opportunity to join our Chemistry Crew in the finale. Add your X Factor to our secret formula!!!

- **Primary School Science**
Visit our Primary Schools Science area to view videos and exciting experiments and activities demonstrated by primary school pupils from Sligo town and county.
C Block Foyer 12.30 - 2.30pm



Mad Professor with Niall O'Dwyer Room A0006 1.00, 2.30 & 4.00pm

Fun and interactive science experience. Join the Mad Professor on a journey through many principles of science seeing how everyday items help shape the world of science.



Professor Plunger Room Aurivo LT 1.30 & 3.30pm

Interactive street show with Professor Plunger, a non-verbal comedy clown show. The Professor is ready to show off his greatest invention; his amazing hair! An inventive and original show featuring dancing, hair, plungers and a bell-playing finale. The Professor is a charming old world rogue with a little cheeky grin and a very large head of hair. Professor Plunger is a non-verbal show using the international language of comedy and music.



'BANG' The Science of Special Effects with Wonderstruck ATU Sligo Hume Hall 12.30 & 3.00pm

Ever wondered how they create those awesome explosions in action movies? Well that's what this show is all about! In BANG! we explain how it's all done. Through the show we look at smoke effects, blast effects and, of course, fire effects. With some awesome demonstrations including the unique 'Exploding Shed of Science', the water melon jerk rig and a car full of teddy bears we explain the science behind the movies!



WOW Airshow with Professor Egghead Room A0004 12.15, 1.30 & 4.15pm

Watch how Professor Egghead explores the Air around us. See, what amazing experiments can be conjured up using just Air. Professor Egghead is not interested in the ordinary but very interested in the EXTRAORDINARY. Come on a journey of exploration and discovery and find out what's all around us and how it can affect our lives.



Science - It's like Magic but real... with Graham Hewston Room A0005 12.45, 2.10 & 4.10pm

In this fun-filled presentation Graham will draw the fine line between science and magic and then we will explore the consequences of crossing and double-crossing that line! Highlights include: confusing illusions, wandering water, mysterious floating objects and things which shrink or grow just by looking at them. Get ready for this interactive show to sort out the magic from the science...



Fishy & Dishy with Circus 250 Room B1202 12.30, 1.30 & 3.30pm

A short, fast paced funny five-minute circus act showing you how it's done, followed by hands-on juggling and plate spinning workshops. The theme is the ocean - we juggle things from the deep, look at what's washed up on the shore, where it's come from, and what we can do about it. It has plenty of science, but light of touch and threaded through the objects that you're juggling in your hands - whether shells, sea finds or a buoy.



The Sligo Science Fair is supported by **Sligo Civil Defence**



Nature Challenge with Michael Bell
Room B1080
All day Drop In

Learn all about the wonderful world of nature to be found in and around Co Sligo with quizzes to test your nature knowledge, live mini beasts to view and bones from the second largest animal in the world that were found in Sligo!

Join Michael and discover Nature around us.

- **The Wonder of Marine Life with Robin Barry**
Room B1201
All day Drop In

- **Eagles Flying**
- **Birdwatch Ireland**
Main Reception All day

- **Kitchen Chemistry with St Angela's College**
Cooking up a Chemical Storm" students from St Angelas's College, will blow your minds with their chemical wizardry just using a few ingredients from the kitchen cupboard! Come along and learn how to make DNA, rain clouds, elephants' toothpaste, rainbows and lots more!
- **Sustainable Shared Spaces**
Our project is examining how we can better connect to nature and each other to improve mental and environmental health and our local communities. We will be engaging with the public about our project through a range of interactive activities, including Lego.
Main Concourse All day



Pre-school Science Room (1-7 years) with Maia Purposeful Play
B1082
All day Drop In

Science discovery through child-led play, learning and meaningful engagement for your little ones at the science fair.

Through these sensory experiences, children get to explore early STEAM concepts. The workshops are child-led which fosters independence but also allows children to unearth their passions, cultivate curiosity, and create their own meaningful play experiences. Drop in and let your little ones enjoy a memorable science adventure!

- **Thunderbolts & Lightening - Science Buskers**
Out & About at the Fair All day



Scientists on stilts with Circus 250
Roaming the fair all day

Do you look up to scientists? Well now you really can! Science on Stilts is a walkabout show where real life scientists - who are also accomplished stilt walkers - do experiments with you. Science on Stilts elevates how atoms are made or why bubbles reflect colours to a new height - and huge fun.



Juanta The Cleaner with Circus 250
Main Concourse all day

Juanita the Cleaner will be out and about at the science fair, collecting her rubbish. But what can she do with our rubbish? With displays of hilarious climate-saving clowning, Europe's leading female clown Angelica Santander tackles pollution with dance, circus and several bin loads of humour.



Clean Coasts - Think before you flush
Main Concourse all day

Think Before You Flush is an environmental awareness campaign with a simple message - 'Protect our natural environment and wastewater network by only flushing the 3 Ps (pee, poo and paper) down the toilet, everything else goes in the bin.' By raising awareness and advocating responsible flushing habits, Think Before You Flush aims to protect our



waterways, preserve aquatic ecosystems, and maintain the overall cleanliness and health of our surroundings.

We believe that together, we can make a significant difference by promoting sustainable practices and fostering a deep respect for our natural resources, creating a cleaner and more sustainable future.

This campaign is operated by Clean Coasts (An Taisce) in partnership with Uisce Éireann.

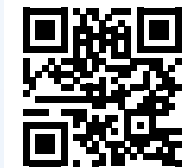


ATU lead in the EU Green University Alliance
Main Course all day

ATU is a partner in EU GREEN, a European university alliance with an overall aim to increase sustainability in peripheral regions of our continent.

The nine European partners are strategically aligned to engage their education, research, innovation, communities and enterprise towards developing sustainable solutions locally, regionally and globally.

Please scan below for further information on EU GREEN:



- **Civil Defence Demo Area**
- **Sligo Bay Life Boat Services**
Take the opportunity to meet the volunteers and members of Sligo and Leitrim emergency services, hear their stories and see the equipment they use.
Main Canteen All day



AbbVie - Promoting STEM in our communities



AbbVie's commitment to promoting science within our communities is exemplified by the company's ongoing sponsorship of the Sligo Science Festival. AbbVie's support has helped the festival undertake exciting initiatives including performances, educational exhibits and STEM-focused engagements with local schools. This year, employees from AbbVie's manufacturing facilities in Sligo will be joined by a very special guest speaker to host a number of exciting and engaging shows showcasing the impact of STEM.

See us on the Concourse and at the Wonderstruck 'BANG' show



Community Food Initiative with Sligo Leader Partnership
Main Concourse all day

Healthy Eating Information stand for children: Our stand will have a variety of information leaflets on Healthy Eating, portion size etc regarding babies, children, and teenagers (information is provided through Safefood and HSE). We will also run a competition, where people will guess some in-season fruits and vegetables that we will have on display, and their entry will be put into a draw to win some local Butcher and Green Grocery vouchers. We will also be providing some free fresh fruit, water, and water bottle.



Digging up the facts: the importance of a healthy soil
Main Course All day

Did you know that soil is more than just dirt? It is one of the most diverse and important ecosystems on the planet! Healthy soil supports our food, the air we breathe, and even the water we drink. Come get your hands dirty, and learn about why we should protect soil and what makes a soil 'healthy'. Here at ATU soil has really grown on us, the **MMeSH** project is studying the chemistry and microbiology of soils using state-of-the-art techniques to find out how the ground beneath our feet is doing and help ensure we protect soil for future generations. Hayley and Michaela are postgraduate students in Dr. Shane O'Reilly's lab researching soil health indicators in soils across Ireland.

The aim of SCORE is to design, develop, monitor and validate robust adaptation measures in coastal and low-lying areas to protect them from increasing climate and sea level risks, including coastal flooding and erosion, to enhance their overall long-term resilience.

Come along to our interactive stand at the fair to find out more.



Discovering the chemical treasure of our oceans
Main Course all day

Have you ever wondered what secrets our oceans hold? Did you ever stop to think about the creatures there and how they use chemistry to make a living in extreme conditions? When we think of marine life, we picture whales, coral and so on but in fact, most of the diversity of life is found among microorganisms, tiny organisms not visible to the naked eye.

Humans have always looked to nature to solve problems - and for good reason. Natural resources have proven to be a bountiful source of useful products, including revolutionary treatments for disease. With the ProspecTER project, we are exploring marine microorganisms to discover new compounds that will benefit society. Come find our stand and join us as we dive into the unknown...

- **All-Ireland Pollinator Plan with Leif Barry**
Room B1081
All day Drop In



The Score Project

Science Week

13TH - 18TH NOVEMBER

Sligo Science Festival's Lectures, Events and Performances



SCHEDULE OF EVENTS - ALL EVENTS FREE

For Online Events bookings please book via the Virtual Brochure links or via our website: www.atu.ie/slignsciencefestival

For schools activities please contact our festival producer, Oli Melia - oli.melia@atu.ie



MONDAY 13TH NOVEMBER



Spin Bots
In Person Workshop with Wonderstruck

10am
- At your Primary School only event (6-7 years).

These unpredictable little robots shoot off in all directions!

Powered by a simple electrical circuit that spins a ball under their base, our SpinBots rest on three legs and are always a bit off balance. That means

it's impossible to know where they're going to go and when they'll change direction!

This is a short workshop (about 45 mins) specifically designed for our younger prospective scientists.

Contact Oli Melia - oli.melia@atu.ie to book in your class

Professor Plunger
In Person Science Roadshow with the Fanzini Brothers

10am and 1pm
- At your Primary School only event (7-12 years).

Interactive street show with Professor Plunger, a non-verbal comedy clown show. The Professor is ready to show off his greatest invention; his amazing hair! An inventive and original show featuring dancing, hair, plungers and a bell-playing finale. The Professor is a charming old world rogue with a little cheeky grin and a very large head of hair.

Professor Plunger is a non-verbal show using the international language of comedy and music.

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Mad Professor
Science Roadshow
with Mad Professor
10am and 11.30am

- Ballymote Community Library. Primary Schools event (7-12 years)
Fun and interactive science experience. Join the Mad Professor on a journey through many principles of science seeing how everyday items help shape the world of science.

Invitation Only



All Ireland Pollinator Plan
Workshop with Leif Barry
10.00am and 1.00pm

- At your Primary School only event (7-12 years)
Leif Barry is an environmental scientist from the Burren in Co. Clare. Leif is a Bumblebee



Air Powered Rockets
Workshop with Wonderstruck
1.00pm

- At your Primary School only event (8-12 years).
Pupils work in pairs or individually to build paper and card rockets. Once complete, we launch the rockets from our custom built launchers, supplying launch pressures up to 100 psi! The main STEM topics covered in this workshop are: Forces, Aerodynamics & Friction, as well as more holistic skills such as team working, communication, investigation etc.

Contact Oli Melia – oli.melia@atu.ie to book in your class



Airheads
Science Roadshow with Thunderbolts & Lightening
10.00am and 1.00pm

- At your Primary School only event (7-12 years).
Who you callin' Airhead?! Steve has a new hobby. He's a bit of an air head. Long suffering friend Bob wants to know more, though soon he'll wish he'd never asked.

Join them for this ridiculous adventure of nonsense, one-upmanship and hovercrafts*. Who knows? You might even learn something along the way. This entertaining and educational science show experiments with air, pressure and Bernoulli's principle.

*Contains actual hovercraft
Contact Oli Melia – oli.melia@atu.ie to book in your class



recorder for the National Biodiversity Data Centre. Learn all about our many wild pollinators and how to provide them with nectar and pollen sources so they can survive and thrive. Join Leif and learn how to become a citizen scientist!

Contact Oli Melia – oli.melia@atu.ie to book in your class



Wonders of Marine Life
Workshop with Robin Barry
10am and 11.30am

- Sligo Central Library. Primary Schools event (7-12 years)
Experience the wonderful magic of the Marine World around us and learn how to identify different sea shore species edible and non-edibles, such as shellfish, seaweed plants, fish, birds and mammals emphasizing the importance of protecting marine life from the dangers of plastics entering our waterways. Join Robin for a journey of marine life discovery.

Invitation Only



What is Menopause?
Talk with Catherine O'Keefe
7.00pm

- Online event. Public Event (12+)
Facts & Myths - and what to expect. Join Catherine O'Keefe is a Menopause Workplace Consultant, founder of Wellness Warrior, and creator of the Menopause Success Summit. Catherine is the author of the best seller All you need to know about menopause, as she guides us through the practical steps to thrive through these years.

Catherine helps organisations implement a comprehensive menopause strategy that leads to meaningful change. She's helped hundreds of companies choose support over silence including Workday International, StateStreet, Department of Health, Sainsburys, and Microsoft. Catherine is on a mission to shatter the menopause taboo, for good.

To request a link to this event, please go to forms.office.com/e/zWfgvDnp2s or contact Oli Melia – oli.melia@atu.ie



TUESDAY 14TH NOVEMBER



Spin Bots

In Person Workshop with Wonderstruck

10am

- At your Primary School only event (6-7 years).

These unpredictable little robots shoot off in all directions!

Powered by a simple electrical circuit that spins a ball under their base, our SpinBots rest on three legs and are always a bit off balance. That means it's impossible to know where they're going to go and when they'll change direction!

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Professor Plunger is a non-verbal show using the international language of comedy and music.

Contact Oli Melia – oli.melia@atu.ie to book in your class



Bugs for Life

Workshop with Thunderbolts & Lightening

10am and 11.30am

- Sligo Central Library. Primary Schools event (7-12 years)

First up, you'll learn a little bit about entomophagy (eating insects) and the work of the charity 'Bugs For Life', cofounded by Thunderbolts & Lightening's own Craig Macfarlane, with a community in Benin, West Africa. Then, it's time to get creative and design and decorate your own bug farm nready for your very own insects – darkling beetle larvae, otherwise known as mealworms, an extremely popular edible insect. To finish, if you are feeling adventurous enough, you can try some mealworms for yourself in a tasty treat – yum!

Invitation Only



Air Powered Rockets

Workshop with Wonderstruck

1.00pm

- At your Primary School only event (8-12 years).

Pupils work in pairs or individually to build paper and card rockets. Once complete, we launch the rockets from our custom built launchers, supplying launch pressures up to 100 psi! The main STEM topics covered in this workshop are: Forces, Aerodynamics & Friction, as well as more holistic skills such as team working, communication, investigation etc.

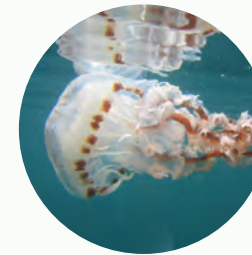
Contact Oli Melia – oli.melia@atu.ie to book in your class



All Ireland Pollinator Plan

Workshop with Leif Barry

10am and 11.30am



Wonders of Marine Life

Workshop with Robin Barry

10.00am and 1.00pm

- At your Primary School only event (7-12 years)

Experience the wonderful magic of the Marine World around us and learn how to identify different sea shore species edible and non-edibles, such as shellfish, seaweed plants, fish, birds and mammals emphasizing the importance of protecting marine life from the dangers of plastics entering our waterways. Join Robin for a journey of marine life discovery.

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- Ballymote Community Library. Primary Schools event (7-12 years).

Leif Barry is an environmental scientist from the Burren in Co. Clare. Leif is a Bumblebee recorder for the National Biodiversity Data Centre.

Learn all about our many wild pollinators and how to provide them with nectar and pollen sources so they can survive and thrive. Join Leif and learn how to become a citizen scientist!

Invitation Only



Unlocking the Potential of Innovation: Bridging Ideas to Real-world Impact

Talk with Prof. Suresh C. Pillai

7.00pm

- ATU Sligo room A0004 Public Event (12+)

In recent years, there has been a surging demand for innovation that has spurred economic activities across diverse fields of science and technology. Prof. Pillai will examine the fundamental elements propelling innovation, from the inception of groundbreaking concepts to their far-reaching impact on society, businesses, and individuals, with the aim of explaining the distinctions between invention and innovation while also addressing various facets such as patent filing, commercialization, and different categories of innovation, including those driven by technological advancements and market dynamics.

Prof. Suresh C. Pillai, Director of the Health and Bio-Medical Research Centre and head of Nanotechnology and Bio-Engineering Research Group, Atlantic Technological University, ATU Sligo.

WEDNESDAY 15TH NOVEMBER



'BANG' The Science of Special Effects

Science Show with Wonderstruck

10am

- ATU Sligo Hume Hall Primary School only event (7-12 years)

Ever wondered how they create those awesome explosions in action movies? Well that's what this show is all about!

In BANG! we explain how it's all done. Through the show we look at smoke effects, blast effects and, of course, fire effects. With some awesome demonstrations including the unique 'Exploding Shed of Science', the water melon jerk rig and a car full of teddy bears we explain the science behind the movies!

Contact Oli Melia – oli.melia@atu.ie to book in your class



Amazing Animals

Science Show with Braintastic

10am

- ATU Donegal, Letterkenny - Room 1101. Primary School only event (7-12 years)

Throughout the animal kingdom, creatures great and small have developed amazing abilities. In this interactive show, Braintastic! Science challenge you to complete tasks that have been used in real life to test the intelligence of a range of animals. You'll need to use your creativity to solve tricky logic puzzles normally completed by chimps, parrots and even dolphins.

By exploring the range of abilities held by our nearest cousins, and those much farther from us on the evolutionary tree, we will throw light on the difficulties of defining intelligence, and the importance of fair tests. The audience will leave with a new-found respect for the wonder of life on earth, and an understanding of the amazing abilities of our animal cousins.

Please contact ATU Donegal - Victoria Wilson (victoria.wilson@atu.ie) to book your school place



Airheads

Science Roadshow with Thunderbolts & Lightening

10.00am and 1.00pm

- At your Primary School only event (7-12 years).

Who you callin' Airhead?! Steve has a new hobby. He's a bit of an air head. Long suffering friend Bob wants to know more, though soon he'll wish he'd never asked.

Join them for this ridiculous adventure of nonsense, one-upmanship and hovercrafts*.

Who knows? You might even learn something along the way. This entertaining and educational science show experiments with air, pressure and Bernoulli's principle.

*Contains actual hovercraft

Contact Oli Melia – oli.melia@atu.ie to book in your class



Am I Normal

Science Show with Braintastic

1.00pm

- ATU Donegal, Letterkenny - Room 1101 Secondary School only event (12-15 years)

In this interactive stage show, we will explore what exactly it means to be 'normal', and whether such a thing exists at all. Beginning by investigating the history of normalcy, we will dive into statistics, genetics, evolution and brain plasticity as we discover the huge amounts of variability that exist in the human population – and perhaps how this impacts on biomedical research and discovery.

Throughout the show, volunteers will create two pieces of brain art, using a pendulum, to illustrate the uniqueness of each of our brains. Though both pieces will start with the same raw materials, through a combination of randomness, luck and choices, we will end up with two very different brains- in the same way that our experiences and choices shape us throughout our lives. We will finish by reinforcing that this variation is a good thing for society as a whole, and that our strength as a species lies in our differences, while supporting each other so we can all get the best out of our amazing, individual brains.

Please contact ATU Donegal - Victoria Wilson (victoria.wilson@atu.ie) to book your school place



'BANG' The Science of Special Effects

Science Show with Wonderstruck

6.30pm

- ATU Sligo Hume Hall Public Family Show (7+ years)

Ever wondered how they create those awesome explosions in action movies? Well that's what this show is all about!

In BANG! we explain how it's all done. Through the show we look at smoke effects, blast effects and, of course, fire effects. With some awesome demonstrations including the unique 'Exploding Shed of Science', the water melon jerk rig and a car full of teddy bears we explain the science behind the movies!

Please arrive early to guarantee your seat!



atu.ie/
sligo
science
festival



Workshop with Madlab

10am & 1pm (1.5hrs)

- Dromore West Community Centre
Primary School only event (8-11 years)

Learn how to solder and make a working electronic gadget to take home with you. We have lots to choose from including lie detectors, musical bagpipes, burglar alarms and steady-hand games.

Contact Karen Tonry (ktonry@sligoleader.com) at Sligo Leader Partnership to book in your class



The Heart – from Horses to Apple via Space

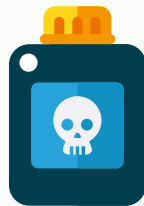
Talk with Paul Nolan

7.00pm

- ATU Sligo room A0004
Public Event (12+)

Paul is a Clinical Lecturer on ATU Sligo's Clinical Measurement Physiology Programmes. He is a Cardiac Physiologist of over 22 years' experience and European accreditation in the areas of Adult Echocardiography and Cardiac Devices.

His talk will explore the development of cardiac diagnostics and treatments from the 1800's through to the modern day.



THURSDAY 16TH NOVEMBER



Fan Powered Cars
Workshop with Wonderstruck

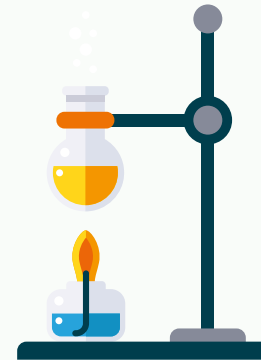
10.00am and 1.00pm

- At your Primary School only event (8-12 years)

Pupils work in teams of three to build a prototype model fan-powered car. They test the prototype to establish a benchmark performance and then are given access to a wide range of different components with which to improve the performance of their cars.

The session ends with a competition to find the 'best' car!

Contact Oli Melia – oli.melia@atu.ie to book in your class



Amazing Animals
Science Show with Braintastic

10am

- Primary School only event (7-12 years)

Throughout the animal kingdom, creatures great and small have developed amazing abilities. In this interactive show, Braintastic! Science challenge you to complete tasks that have been used in real life to test the intelligence of a range of animals. You'll need to use your creativity to solve tricky logic puzzles normally completed by chimps, parrots and even dolphins.

By exploring the range of abilities held by our nearest cousins, and those much farther from us on the evolutionary tree, we will throw light on the difficulties of defining intelligence, and the importance of fair tests. The audience will leave with a new-found respect for the wonder of life on earth, and an understanding of the amazing abilities of our animal cousins.

Contact Karen Tonry (ktonry@sligoleader.com) at Sligo Leader Partnership to book in your class



Workshop with Madlab

10am & 1pm (1.5hrs)

- Tubbercurry Community Library
Primary School only event (8-11 years)

Learn how to solder and make a working electronic gadget to take home with you. We have lots to choose from including lie detectors, musical bagpipes, burglar alarms and steady-hand games.

Invitation Only



Planetary System: A Short Introduction

Talk with Prof. Raymond Pierrehumbert

11.30am

- At your Secondary School only event (14-17 years) Sligo Town School Only

Professor Raymond Pierrehumbert FRS is the Halley Professor of Physics at the University of Oxford. Previously, he was Louis Block Professor in Geophysical Sciences at the University of Chicago.

Prof. Pierrehumbert will introduce us to the latest developments in understanding the formation and properties of planetary systems, showing how scientists are beginning to lift the veil on the question of whether we are alone in the Universe, what planets are made of, and where the ingredients come from and what happens at The End of the Universe

Contact Oli Melia – oli.melia@atu.ie to book in your class



Am I Normal

Science Show with Braintastic

1.00pm

- Ballymote Secondary School only event (12-15 years)

In this interactive stage show, we will explore what exactly it means to be 'normal', and whether such a thing exists at all. Beginning by investigating the history of normalcy, we will dive into statistics, genetics, evolution and brain plasticity as we discover the huge amounts of variability that exist in the human population – and perhaps how this impacts on biomedical research and discovery.

Throughout the show, volunteers will create two pieces of brain art, using a pendulum, to illustrate the uniqueness of each of our brains. Though both pieces will start with the same raw materials, through a combination of randomness, luck and choices, we will end up with two very different brains- in the same way that our experiences and choices shape us throughout our lives. We will finish by reinforcing that this variation is a good thing for society as a whole, and that our strength as a species lies in our differences, while supporting each other so we can all get the best out of our amazing, individual brains.

Contact Karen Tonry (ktonry@sligoleader.com) at Sligo Leader Partnership to book in your class



The Sligo Science Social

Featuring Prof. Raymond Pierrehumbert, Blaithe Sweeney & Dr Robin Parmar, music & more!

7pm

- Thomas Connolly's Bar, Markievicz Rd, Sligo (over 18's only)

Join us at the Science Social for brief science talks, discussions & debate.

Prof. Raymond Pierrehumbert, the Halley Professor of Physics at the University of Oxford will give us a short introduction into the universe along with insightful talk on The Blue Mind Theory by ATU's Blaithe Sweeney and a look at the Science of Music with the University of Limerick's Dr Robin Parmar.

The talks will be followed by live session music. All welcome!



ISTA Senior Science Quiz for Second Level Schools

The annual ISTA science quiz sponsored by AbbVie

7pm

- ATU Sligo Room A0006

The Irish Science Teachers' Association, Eol Oidí na hÉireann, is the professional association for teachers of science in the Republic of Ireland. As such it is represented on the relevant subject development groups of the National Council for Curriculum and Assessment. Since its foundation in 1961 it has been providing continuous professional development and support for its members at both national and branch levels.

The Association has close affiliations with the Association for Science Education in the UK and is a founding member of ICASE, the International Council of Associations for Science Education. It is also represented on SCIENTIX which promotes and supports a Europe-wide collaboration among STEM (science, technology, engineering and maths) teachers, education researchers, policymakers and other STEM education professionals.

Members are also supported and informed of developments through the Association's website (www.ista.ie) and through its Journal, SCIENCE, which is posted to members three times a year.

For up-to-date information visit:

- Website: www.ista.ie
- Twitter: @IrishSciTeach
- Facebook: www.facebook.com/IrishScienceTeachersAssociation



SLIGO SCIENCE FESTIVAL





Overview of Forensic Autopsy Pathology

In- person talk with Dr. Paul Hartel, MD

8pm

- ATU Sligo Room A0005 Public Event (Age 16+)

An engaging talk by Dr. Paul Hartel. Dr. Hartel is Clinical Lead Consultant Histopathologist at Sligo University Hospital, clinical Associate Professor with the Department of Pulmonary and Critical Care Medicine at West Virginia University School of Medicine and Honorary Senior Lecturer in Pathology at National University of Ireland, Galway, School of Medicine. He is active in teaching and research with numerous publications and has been invited to speak nationally and internationally, and as expert witness for Irish and US law firms. Dr. Hartel is a Diplomat of the American Board of Pathology and Fellow of the Faculty of Pathology, Royal College of Physicians in Ireland, College of American Pathologists and American Society of Clinical Pathology.



Between Ireland and Iceland - Bird Migration Stories

Talk with Jim Wilson

8.00pm

- Clayton Hotel Public Event (All Ages)

Jim Wilson is a wildlife writer, international wildlife tour leader, photographer and broadcaster. He is a former chairman of BirdWatch Ireland (BWI) and a former director of the Irish Whale and Dolphin Group. His publications include the best-selling *The Birds of Ireland*, *A Field Guide* (2013) and *Ireland's Garden Birds* (2008) and he also wrote the first field guide to the Whales and Dolphins of Ireland (IWDG). He has been to the Antarctic over 30 times and in 2016 co-produced a phone app called 'Antarctic Wildlife Guide', the first photo-ID guide app to the birds, whales, dolphins, and seals of the region.

He established BWI's Garden Bird Survey in 1987 and has been involved in the study and conservation of Ireland's natural heritage for over 40 years. A regular contributor to *The Mooney Goes Wild Show* on RTE Radio 1 and a key figure in the international live broadcast of the *Mooney Goes Wild Dawn Chorus*, based in BWI's Cuskinny Marsh Nature Reserve near his home town of Cobh.

www.irishwildlife.net

FRIDAY 17TH NOVEMBER



MADLAB

Workshop with Madlab

10am & 1pm (1.5hrs)

- At your Primary School only event (8-11 years)

Learn how to solder and make a working electronic gadget to take home with you. We have lots to choose from including lie detectors, musical bagpipes, burglar alarms and steady-hand games.

Contact Oli Melia – oli.melia@atu.ie to book in your class



Planetary System: A Short Introduction

ONLINE Talk with Prof. Raymond Pierrehumbert

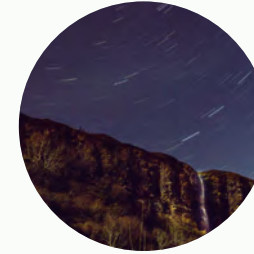
11.30am

- Secondary School only event (14-17 years)

Professor Raymond Pierrehumbert FRS is the Halley Professor of Physics at the University of Oxford. Previously, he was Louis Block Professor in Geophysical Sciences at the University of Chicago.

Prof. Pierrehumbert will introduce us to the latest developments in understanding the formation and properties of planetary systems, showing how scientists are beginning to lift the veil on the question of whether we are alone in the Universe, what planets are made of, and where the ingredients come from and what happens at The End of the Universe

Contact Oli Melia – oli.melia@atu.ie to book in your class and receive the link to this talk



Moonwalking in Sligo

Walk & Learn with Northwest Adventure Tours

8.00pm

- Slish Woods, Sligo Public Event (Age 12+)

Join Northwest Adventure Tours for a fun and fact filled Moonlit Night Hike on Friday night. Hike under the starlit sky and learn the wonders of astronomy and what our ancestors thought about the skies. Discover how Star Wars really originated in Sligo and chill out under the stars while enjoying a warm drink and some tips from a professional night sky photographer. Be sure to bring your cameras along and pick up some new tips along the way. Northwest Adventure Tours torches will light the way through this ancient landscape that is steeped in history and astronomical connections. The hike will coincide with the tail end of Leonids Meteor Shower so you might be lucky to enough to spot a few shooting stars.

(Age 12+) Places are limited.

Contact Oli Melia – oli.melia@atu.ie to book in your place on this event

SATURDAY 18TH NOVEMBER



Kids Who Fell to Earth

ONLINE Interactive science show

Access All Day

- Public Event (All Ages)

Intergalactic voyagers Zing and Zong requesting immediate assistance! Their spaceship has crash-landed somewhere not too far away on Earth and they need local expertise to save their dying homeworld Jaahrgon.

Will you come to the rescue? Join them on their quest and help them to learn the surprising secrets of water before their planet becomes a desert, then use your knowledge to help these heroic alien siblings find their way home!

To request a link to access this event, please go to forms.office.com/e/LuuXC0esGg or contact Oli Melia – oli.melia@atu.ie

ROADSHOWS

Science Roadshows for Children in the Northwest

Science roadshows in association with County Sligo LEADER Partnership Company Limited. For further information please contact Karen Tonry - ktonry@sligoleader.com

Science roadshows in association with Sligo County Libraries. For further information please contact pkeane@sligococo.ie

Thanks to ATU's Dr Stephen Daly for his roadshow to Scoil Ursula.

For more information on ATU Roadshows, please contact our festival producer, Oli Melia - oli.melia@atu.ie

AbbVie Schools Roadshow

AbbVie employees from their manufacturing sites in Sligo are currently participating in company-supported outreach that's focused on promoting science role models currently active in the Irish workplace. The company's employees are aiming to drive greater student awareness of the rewarding career opportunities that can be unlocked by studying STEM subjects. An AbbVie employee will visit schools and provide a brief Day in the Life presentation followed by a simple, but engaging, science experiments in their classroom.



ALL WEEK: SUNDAY 12TH - SUNDAY 20TH NOVEMBER



The Sligo Science Trail

science clues in shop windows - can you find them?

Sligo City Centre

- Public Event (All Ages)

The Sligo Science Festival have placed Science Clues in shop windows in Sligo City Centre. Can you find them all?

Download the trail map from www.atu.ie/sligosciencefestival from Sunday 12th November and start the hunt. Once you complete the trail, take a photo of your completed map with answers and email to oli.melia@atu.ie to enter the prize winning draw.



THANKS

Sligo Science Festival Organisers sincerely thank Partners, Local Businesses, Science Communicators and Community Groups for their support, including but not limited to:

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