

Science is Everywhere



An Athena Media Production for Newstalk 106-108fm made with the support of the BAI.

8x22'

Science is Everywhere is a new science series for Newstalk 106-108fm presented by young scientist **Dr Lara Dungan** which aims to explore everyday questions about our world and lives, from the water we drink, to why we fall in love.

This 8 part feature series seeks to provoke curiosity and unpack the science in everyday life and answer questions like 'why are the bees disappearing?' and 'how in a country with so much rain can we have a problem with clean water?' Each episode is driven by questions and scientific experiments which seek to answer those questions like **Prof. Shane Bergin** at TCD who uses his laboratory to demonstrate how the human voice can shatter a wine glass.

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Billings

Episode 1: The Science of Sound and Music.

TX: Saturday 15th March at 7am

Repeat Sunday 16th March at 11pm

In the first episode of **Science is Everywhere** we explore how we hear and what it means to us. Dr. Lara Dungan asks if there is such a thing as a good or a bad sound, and visits **physicist Prof. Shane Bergin** in his sound laboratory in Trinity College, Dublin, where he demonstrates the physics of sound - including the doppler effect. Neurologist, and brain expert, **Dr. Richard Roche**, explains how our memory is linked to music and why some songs can get stuck in our head, while music therapist **Eli Chourdaki** describes how old songs can awaken the mind and personality of dementia patients. **Tony Perrey**, founder of Windmill Lane Recording Studios, describes how he sees colour for sounds and how it helps him in his music editing.

Episode 2: The Science of Love

TX: Saturday 15th March at 7.30am

Repeat Sunday 16th March at 11.30pm

How do we fall in and out of love? In the second episode of **Science is Everywhere** Lara meets with Biologist **Emma Teeling** where she explains why we fall in love and how attraction is key to this. Lara tries to find out if there is such a thing as love at first sight and speaks to **Dr. Niamh Shaw** to find out what is the science behind it. UCD social historian **Professor Mary E. Daly** explains the history behind the theory of marrying the girl or boy next door.

Episode 3: The Science of Water

TX: Saturday 22nd March at 7am

Repeat Sunday 23rd March at 11pm

The story of how we source our water, the challenge to clean and why the next global wars may be over access to clean water. The River Liffey provides up to 30% of the country's drinking water and making it fit for human consumption is an expensive and laborious scientific process, yet just 1 percent of purified water is actually consumed by humans. Dr. Lara Dungan talks to scientist and hydrologist, **Associate Professor Michael Bruen** and explores the journey of the Liffey water from the city, where visual artist **Fergal McCarthy** swims regularly in it, to Leixlip water treatment plant where plant manager, **John Keane** describes the chemical process required to make that raw water fit to drink. **Professor Alan Reilly**, CEO of the Food Safety Authority tackles the thorny issue of why Ireland adds fluoride to it's drinking water while **Dara Page** at the Environmental Protection Agency, explains where we get our water from and why we're reliant on our rivers.

Episode 4: The Science of Weather

TX: Saturday 22nd March at 7.30am

Repeat Sunday 23rd March at 11.30pm

In this episode of **Science is Everywhere** we investigate the science behind the weather. Lara meets with **Gerald Fleming**, head of Forecasting in MET Eireann, and he explains to her how experience, mathematical equations and technology helps them form the weather forecast we receive. **Prof. John Sweeney** explains to Lara the difference between climate and weather and Lara visits University College Cork to meet with **Dr. Jimmy Murphy** to see their research on the impact of climate change on coastal structures.

Episode 5: The Science of Transport

TX: Saturday 29th March at 7am

Repeat Sunday 30th March at 11pm

In the fifth episode of **Science is Everywhere** we examine public transport and how science is aiding in it's advancement. Lara meets with engineer **Finola O'Driscoll** from the National Transport Authority who explains how accurate Real Time is and how it operates. The Luas brings around 80,000 people a day to their destination, and Lara visits the Luas control centre where she speaks with operations manager, **Paul Scully**. In this episode Lara also test drives an electric car to see how electricity can transport you to your destination.

Episode 6: The Science of Sport

TX: Saturday 29th March at 7.30am

Repeat Sunday 30th March at 11.30pm

In this episode of **Science is Everywhere** Lara seeks to find out if an athlete is born or bred. **Prof. Brendan Egan** explains to Lara how it is a mixture of both, that you can't just be born an athlete you have to train everyday for it. Lara also meets with Wimbledon Tennis Player **Conor Niland** and olympic athletes **Natalya Coyle** and **Maria McCambridge** to get their insight on whether it takes hard work or good genes to get to their level of sport. We visit ex-olympian **Prof. Colin Boreham** in UCD where he describes the elements that make up an elite sportsperson.

Episode 7: The Science of Technology

TX: Saturday 5th April at 7am

Repeat Sunday 6th April at 11pm

Can the blind see, the deaf hear and the paralysed walk? In this episode of **Science is Everywhere** Lara investigates the advancements technology offers to enable those with disabilities. **Mark Pollock** meets with Lara and shows her how he has regained the ability to walk by using Ekso Bionics. Lara visits Ellie, a four year old with a cochlear implant, and speaks to her mother, **Danielle Ryan**, about the impact the implant has had on Ellie's life. **Prof. Fiona Newell** explains how the brain is plastic and how we can retrain it to compensate for lost senses, and Lara visits **Dr. Danny Kelly** in his laboratory in Trinity College where he says a childhood spent playing with Lego is the root of his ground-breaking work in stem-cell and growing bones and organs.

Episode 8: The Science of Nature

TX: Saturday 5th April at 7.30am

Repeat Sunday 6th April at 11.30pm

Are the days of bees numbered? Is colony collapse a reality? And what does it mean for us humans? In the final episode of **Science is Everywhere** Lara visits Ireland's largest commercial beekeeper **Micheál Moynihan** and gets up close with the extraction of honey. **Dr. Anke Dietzsch** speaks to Lara about the decline of the bee and if pesticides are the reason behind it. Lara also chats with leading scientist **Prof. Luke O'Neill** about the impact it has on us and finds out if the rise in hayfever and asthma is related to the decline of the bee.

Producer: Helen Shaw

Presenter: Dr. Lara Dungan

Reporter/researcher: Lisa Essuman

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