

Visitor Guide

Saturday 17 May



Please return your festival lanyard at the end of your visit using the lanyard bins located around the festival









## **Visitor Information**

Opening times 9.00am - 4.00pm Check-in opens at 9.00am - 3.15pm Showfloors open at 9.00am Shows and workshops start from 10.00am

#### Join the conversation #LancSciFest

There is so much to discover across the festival. Take a look at our zone programmes for venues and timings to plan your day.

Take a seat in a **Show** for a live performance or demonstration. There may even be a chance for you to get involved! Take part in one of our many **Drop-in** sessions and **Workshops** to discover something new or get hands-on with an experiment. Visit our two **Science Showfloors**, full of exciting activities the whole family can enjoy.

If you need any help, look out for our Festival Ambassadors wearing blue high vis jackets or red student ambassador uniforms. Or you can visit one of our Information Stands.

#### Age group guidance

- Family friendly sessions for all to enjoy
- Lots of fun for children who are beginning school
- Fun and engaging; content may be too advanced for younger children
- These advanced sessions are aimed at older children who are at, or about to start, secondary school

#### **Shows**

- You do not need to pre-book; please arrive at the venue 15 minutes before the start time to receive a queue number.
- Queue numbers will be issued on a first come, first served basis, which will guarantee you entry to the show.
- Entry will close 5 minutes before the advertised start time
- Shows last up to 60 minutes and are not suitable for children under 4 years of age. Please check the age guidance as some shows may have a higher minimum age.
- We cannot store prams or pushchairs in lecture theatres where shows take place, as we need to ensure all fire exits are clear.

#### **Drop-ins and Science Showfloors**

- You do not need to pre-book; check out our zone programmes for venues and timings.
- There may be a short wait for some activities at busy times.

#### Workshops

- All workshop sessions have been fully pre-booked with no additional places available today.
- If you have pre-booked a workshop, please arrive at the venue at least 5 minutes before the advertised start time. Late arrivals may not be admitted.



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Terms and conditions available at lancashire.ac.uk/LancSciFest



# **Finding Venues**

All festival venues can be found using the festival map on pages 34-35.

#### Information stands i



We have four Information Stands across campus where you can pop along with your queries and our Festival Ambassadors will be able to help you.

#### **Parking**

Please use public transport if possible. A limited amount of free parking is available on the University's car parks. You can ignore any University pay and display machines or permit holder only signs. However, please keep disabled bays free for blue badge holders. If parking in non-University car parks you must follow their payment requirements. Find out where the University and public car parks are on the festival map on pages 34-35.

#### Food and drink

Food and drink are available in:

- · Fosters Restaurant (Foster Building)
- Harrington Kitchen (Harrington Building)
- · Café 1828 (Student Centre)

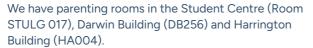
Our catering outlets only accept card payments.

You are welcome to bring packed lunches and we encourage you to bring a water bottle and fill this up at one of the many water fountains across campus. We also have food vendors on the University Square.

#### **Toilets**

Male, female and disabled toilet facilities are located in every University building. Gender-neutral toilets are available on the ground floor of the Student Centre.

#### Parenting rooms and baby changing 6



We also have baby changing facilities in Sir Tom Finney Sports Centre (lower ground floor – past the reception desk) and in the Oasis Faith and Spirituality Centre.

#### Quiet rooms

For groups or individuals with special requirements we have designated quiet rooms away from the noise and crowds in the Oasis Faith and Spirituality Centre.

#### Prayer rooms

Prayer rooms are available in the Oasis Faith and Spirituality Centre. We also have reflection spaces in the following buildings: Greenbank Building (GR218), Harris Building (HB151) and Victoria Building (VB135).

#### First aid

There are three first aid points; these are located at Sir Tom Finney Sports Centre, Harrington Building and in the Student Centre. You can also visit one of our Information Stands to request first aid or speak to any of our Festival Ambassadors.

If you are unable to contact anyone, call 01772 894288 for assistance, and a member of the festival events team will request a first aider to your location.

#### Prams and pushchairs

Please be aware you may be asked to leave your pram/ pushchair in foyer spaces outside of our Showrooms. Please ask festival staff before entering your show. Prams and pushchairs cannot be taken inside lecture theatres as we must keep fire exits clear. Any prams/pushchairs are left at your own risk.

#### Missing children

Safety ID wrist bands are available for all children at check-in. You can write an adult's name and phone number on the band and put this on your child's wrist. Please ask at check-in if you require a wristband.

If you discover your child is missing, please alert a Festival Ambassador who will be able to assist you. Alternatively, call 01772 894288 and support will be dispatched to your



## **Useful Information**

#### Accessible venues

All buildings and rooms are accessible and have reserved areas for visitors with mobility issues. If you require assistance, please speak to a Festival Ambassador.

#### **British Sign Language (BSL)** interpreters

Please make us aware at check-in if you have requested an interpreter or call 01772 894288 on arrival. BSL interpretors need to be requested in advance although we will try to accommodate on the day.

#### **Wellbeing Ambassadors**

Please make us aware at check-in if you have requested a Wellbeing Ambassador who will provide you with one-toone support during your visit or call 01772 894288 on arrival.

#### Hearing system provision

Infrared hearing systems are in place in 10 of our main lecture theatres. To access the system, hearing aid or cochlear implant users will require a receiver device. Please speak to a Festival Ambassador at check-in for further information.

#### **Festival Ambassadors**

Our Festival Ambassadors are here to help you have a great day and answer any questions you may have. Festival Ambassadors will be wearing red student ambassador uniforms or blue high vis jackets.

#### Free Wi-Fi

To log on select 'UCLan-Open' and sign in using your email address. Share your photos and videos and tag us with @UniLancashire for a chance to win a Blackpool Zoo Family Ticket. Find out more and see terms and conditions at lancashire.ac.uk/LancSciFest

#### Photography and filming

Please be aware that throughout the duration of the festival there will be official photography and filming taking place for marketing and promotion of the Lancashire Science Festival, the University, partner institutions and the festival sponsors. Images or footage may be used in both online and offline publications, public relations and advertising (including social media, brochures, information leaflets, adverts and posters).

If, for whatever reason, you or a member of your group does not wish to be filmed or photographed please make yourself known to the person filming or photographing in the area you are in. For more information, please contact lancscifest@uclan.ac.uk or 01772 894288 on the day.

For more information, please see our Festival privacy notice: lancashire.ac.uk/legal/privacy-notices/ lancashire-science-festival

# **Showfloors & Drop-ins**

## Join the conversation #LancSciFest

No need to book or get a queue ticket for these activities. Simply drop-in to enjoy the interactive activities and fun.

See pages 8-19 for full show descriptions.

Find zones using the Festival map on pages 34-35.

	Blue Zone	Orange Zone	Green Zone	U	Age group guidance
		1	•		

LOCATION	9.00-9.30am	9.30-10.00am	10.00-10.30am	10.30-11.00am	11.00-11.30am	11.30am-12 noon	12 noon-12.30pm	12.30-1.00pm	1.00-1.30pm	1.30-2.00pm	2.00-2.30pm	2.30-3.00pm	3.00-3.30pm	3.30-4.00pm
Sir Tom Finney Sports Centre	Science Showfloor - Drop-in 9.00am-4.00pm													
Foster Social Space	Science Showfloor - Drop-in 9.00am-4.00pm													
Foster Square			The Eyes as Windows into the Brain - Drop-in 10.00am-4.00pm 6+											
University Square			Meet the Dinosaurs		Professor Pumpernickel	U	Meet the Dinosaurs		Professor Pumpernickel	U	Meet the Dinosaurs		Professor Pumpernickel	U
Harrington Car Park			Emergency Heroes - Drop-in 10.00am-4.00pm 4+											
Greenbank Building Room 171			Teddybear's Clin	nic - Drop-in 10.00a	am - 12.00pm 4	+	Teddybear's Clinic - Drop-in 12.45pm - 4.00pm 4+							
	9.00-9.30am	9.30-10.00am	10.00-10.30am 10.30-11.00am 11.00-11.30am 11.30am-12 noon			12 noon-12.30pm	12.30-1.00pm	1.00-1.30pm	1.30-2.00pm	2.00-2.30pm	2.30-3.00pm	3.00-3.30pm	3.30-4.00pm	





# Sir Tom Finney Sports Centre Showfloor

Packed with exciting interactive activities the whole family can enjoy.

Venue: Sir Tom Finney Sports Centre (Lower Ground Floor)

Times: 9.00am-4.00pm (last entry 3.45pm)

## Amazing Anatomy: Discover the Science Inside You!

Step into the world of anatomy with the School of Medicine and Dentistry! Explore the human body like never before through hands-on activities and interactive models. Use real ultrasound to see beneath your skin – just like in hospitals! Learn how healthcare professionals use this amazing tool to see what's going on inside without a single cut. Examine both physical and virtual 3D models to see how organs fit together and work in harmony. Listen to your heartbeat, track your pulse, and learn how the body changes with illness, injury, and age. Discover how our knowledge of anatomy is crucial in diagnosing and treating medical conditions.

# AMRC North West – Robotics, 3D printing and systems monitoring

Join AMRC NW to see 3D printing in action, watch a power/sensor monitoring showcase, and challenge a real-life robot to construct a tower.

#### **Beyond the Brain**

Unlock the Secrets of Your Mind! Ever wondered how your brain tricks you with optical illusions? Or how memory works its magic? Dive into the fascinating world of neuroscience at our interactive stall! Explore mindbending illusions, test your memory with fun games, and get up close with a real preserved brain.

Discover the intricate architecture of the brain with our interactive 3D models and see how different areas work together. Whether you're a budding scientist or simply curious, come and experience the wonders of your own mind!

Whether you're six or sixty, there's something to discover, with resources from Alzheimer's Research UK and British Neuroscience Association.

#### **Brain Games**

In this exhibit, we showcase research at the Developmental Cognitive Neuroscience (DCN) Lab at the School of Psychology. Find out more about the human brain and how the brain works when young people are doing different tasks, such as trying to work out how other people are feeling. Visit our exhibit to discover exciting research unveiling the mysteries of the brain of children and young people!

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# Community Rail Lancashire: TrainEd Programme

Join us to celebrate the 200th anniversary of the railway! This special event will showcase the rich history of the railway industry while highlighting how innovation and technology have shaped its future. It's a fantastic opportunity to explore the past, present, and future of rail travel through hands-on activities and engaging exhibits.

Visitors can experience the thrill of controlling our interactive Interlino and Maglev train sets, offering a hands-on understanding of rail technology. The Maglev set will demonstrate how magnetic levitation works, while the Interlino set will allow attendees to simulate the operation of a railway system.

Step into the world of a train driver with our virtual reality headsets. Through immersive VR experiences, you'll have the chance to explore a train driver's cab and navigate a virtual train station, gaining insight into the daily life and challenges of rail professionals.

Get creative by designing a 'Train of the Future'! Children can let their imaginations run wild as they design innovative and sustainable train models. This activity will encourage them to think about how technology and environmental responsibility can shape the future of transportation.

Discover the diverse range of careers in the railway industry. From engineers and conductors to station managers and maintenance crews, attendees can explore different roles through dressing up. This is a perfect chance to inspire young minds and introduce them to the exciting career opportunities within the rail sector.

Community Rail Lancashire are based at Accrington Eco Station. Visitors can learn about the station's sustainable design and how the rail industry is working toward a greener future and how rail travel can contribute to environmental sustainability.



Sir Tom Finney Sports Centre Showfloor (continued):

#### Constructing the Face of a Criminal

Witness and victims of crime often create the face of a person they have seen commit a crime. These so-called 'facial composite' images are used by the police to locate the person responsible. Here at the University of Central Lancashire, we have been working on a facial-composite system called EvoFIT. Using this system, eyewitnesses select faces from screens of alternatives to 'evolve' a likeness of the face, producing an image that is usually identifiable to another person - helping the police to solve crime.

On this stand, you will be able to watch a person pretending to commit a crime and build a likeness of the face using a simplified version of EvoFIT. The system you'll use creates the face in about three or four minutes. You might also like to have a go at identifying some composites created by other people.

#### Could You Be a Dentist?

Could you be a dentist? Can you work backwards using a mirror? Do you have manual dexterity? Can you advise your patients about foods that are bad for their teeth? Come and find out!

#### **EDF Energy Heysham**

EDF energy Heysham 1 and 2 power stations offer a range of careers in STEM subject areas. The Heysham EDF energy site is unique due it having two power stations directly next to each other on the same site. Try your hand at a range of fun activities linked to nuclear power stations.

#### **Electricity North West**

Spark your curiosity about the world around you and explore how electricity works in your everyday life.

Develop an understanding about all things electricity, from where electricity comes from to how it powers your everyday life. Join the team at Electricity North West and learn about electrical circuits, why it's important to save electricity, and how to stay safe around electricity and electrical assets.

## **Eric Wright Group: Construction Activities**

The Eric Wright Group is a leading property and construction management company that develops, builds and maintains the UK's infrastructure. Comprising of specialists in civil engineering, construction, facilities management and property management, the Group is 100% owned by the Eric Wright Charitable Trust. The ethos of each and every company within the Group is to create profit for a purpose and improve the economic prosperity in the places where we work.

The Trust invests significantly into the training and education of young people, through the Eric Wright Learning Foundation and Waterpark, both facilitating specialist training and developing life skills which prepare students for their chosen careers supporting their learning and onward transition into work.

Join Eric Wright to discover how we can achieve impressive construction feats through the power of teamwork and cooperation. You can see their giant tetrahedron structure and have a go at walking over a model DaVinci bridge.



#### Eye Movements: A Window into the Brain

Visit our stand to find out about the really tight relationship between your eye movements and how your brain processes information. We will be demonstrating this using some fun little experimental tasks and our state-of-the-art portable eye-tracking equipment.

#### **Forens-OMICS**

Discover how we can use cutting-edge forensic techniques to evaluate biological age and learn how these assessments can be used for health research (to improve life and health span predictions), for forensic applications (to help solve crime), and for archaeology (to understand the lives and health of our ancestors). Join us to see:

- Models of key molecules used to discuss how biomarkers are used to develop bone-based measurements of biological age. Molecular models can be weighed with digital scales to demonstrate how mass-spectrometer works.
- Displays of bones and teeth to show how assessment of age is used for archaeological and forensic applications.
- 'CSI' style demonstration of how blood samples may be analysed using molecular markers to discover the age of suspects and their identity.

#### **Hand Washing Station**

The School of Pharmacy and Biomedical Science brings you a stall all about hygiene and keeping yourself protected from infections from nasty bugs. Visit our stall to test how well you actually clean your hands with our specialised wash visualisation station, and get pointers on what you need to do to improve.

# Institution of Mechanical Engineers: Improving the World Through Engineering

Discover the exciting world of engineering and how it affects everyone's lives and everything around you, from designing racing cars to being cooled by an inherently safe domestic fan. Also see how Sterling's 19th century technology can be reinvented in the 21st century to supply free energy, and how you can boil water at room temperature! Everyone is talking about climate change, but did you know that it's engineers who can solve the problems that are causing it!

#### Nano-water Technology

80% of our total reported diseases across the globe are caused by contaminated drinking water. From nuclear waste to arsenic, pollution of water people rely on for drinking has devastating consequences. Discover the power of nanomaterials and how scientists at the University are working towards a solution for this global problem. We will demonstrate a simple one step separation technology using nanomaterials with magnetic properties!

# North Lancashire Institute of Chemical Engineers and Westinghouse

Have you ever wondered how essential everyday items like tomato ketchup and clean drinking water are made, and what they have in common with nuclear fuel? The Westinghouse and Institute of Chemical Engineers stand is all about how engineers shape the world around us. You'll be able to try your hand at practical water filtration, see how nuclear fuel is made, and try out being a chemical engineer for the day! Whether you want to know how your favourite food is made, or how to begin a career in the chemicals industry, come and say hello!

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Sir Tom Finney Sports Centre Showfloor (continued):

# Oxford Archaeology and University of Central Lancashire Archaeology

Can you use science to help our archaeologists understand how people used to live over 6,000 years ago? Come and see genuine artefacts from excavations near and far, including some from Windy Harbour, near Blackpool. Investigate how hunter-gatherers and some of Lancashire's first farmers lived, or travel back even further in time to learn about some of Europe's earliest artwork. Try your hand at identifying evidence through a microscope, fitting prehistoric stone tools together and see if you can work out what hunter-gatherers or farmers could have had for breakfast 6,000 years ago.

These hands-on activities are suitable for a variety of ages. Staff and students from Oxford Archaeology and Univeristy of Central Lancashire Archaeology will be on hand to share these discoveries and to tell you more about what it is like to be an archaeologist.

## Placental Function: Nutrient Transport for Fetal Development

Come and learn about the cycle of life in animals and humans with fetal nutrition. The function of placenta is to transfer nutrients from the maternal blood circulation to the baby for its growth. The impairment of placenta can lead to fetal growth restriction. Be an active placenta and find out how many nutrients you can transfer in 30 seconds!

#### **Planet Vet**

Our School of Veterinary Medicine believes that every child, regardless of background, should have the opportunity to turn their dream of a career working with animals into reality. Our School is the first of its kind in Lancashire, and we are committed to providing opportunity for young people to become the talented and compassionate animal care professionals of the future.

Animals play a vital part in the world around us. They provide us with valuable companionship, help keep us safe, provide much of our food and are an integral part of the huge living system that makes up our precious planet. As humans, we have a collective responsibility to make sure these animals have good lives, so there are lots of exciting ways that veterinary scientists can make a difference.

Whilst many vets and allied animal care professionals find rewarding careers in the prevention and treatment of disease in pets and farm animals, veterinary science has a world of exciting possibilities in animal welfare, behaviour, biomedical research, conservation and beyond.

The School of Veterinary Medicine is centred on a 'One-Health, One-Welfare' approach, recognising that veterinary scientists play a key role in the synergy between the health and welfare of animals, humans and ecosystems. We use innovative and practical teaching methods, including the latest technology in veterinary education, and placements with our network of clinical partners across the Northwest and the rest of the UK.

Staff from both our bioveterinary science and veterinary medicine and surgery programmes are here to help budding scientists explore the exciting world of animals. Visit our anatomy area and examine the skulls of different animals to determine how animal's lives and behaviour are shaped by their environment.

Speak to our experts and discover fascinating facts on how veterinary scientists are helping improve the lives of many different species of animals. Delve into the world of diagnostic imaging and see how veterinarians use the latest advances in technology to look inside the bodies of animals, without the need for surgery.

#### Play Zone: Soft Play Area

Let your mini scientists go wild at our Play Zone for smaller explorers. Step in to your dream job with the dress-up Aspiration Station or get ready for some exciting adventures at our soft play area! Our dress-up zone is filled with a wide range of costumes that represent various career paths such as vets, scientists, astronauts and more. Join us and explore the exciting possibilities of what you can be when you grow up. It's the perfect photo opportunity to get a fun reminder of your visit to share with family and friends. Your child can then run, jump, crawl and slide around our soft play area.

Our soft play area provides a safe and stimulating environment where your child can develop their social skills, physical coordination, and cognitive abilities. It is also a great way to burn off some energy and have fun at the same time. Whether your child wants to play with friends, explore new challenges or just let off some steam, our soft play area is the perfect destination. You can relax and enjoy watching your child have fun.

#### **Royal Society of Chemistry**

Join members of the Royal Society of Chemistry to take part in colour chemistry activities – kitchen paper chromatography and glow sticks!

# The Institute of Engineering and Technology (IET)

The IET is Europe's largest Professional Engineering Institution, representing over 169,000 members across more than 150 countries. It is also the most interdisciplinary - to reflect the increasingly diverse nature of engineering in the 21st century. Energy, transport, manufacturing, information and communications, and the built environment: the IET covers them all.

We aim to engineer a better world by inspiring, informing and influencing our members, engineers and technicians, and all those who are touched by, or touch, the work of engineers.

We want to build the profile of engineering and change outdated perceptions about engineering in order to tackle the skills gap. This includes encouraging more women to become engineers and growing the number of engineering apprentices. Education is one of the five strategic themes of the Institution. The IET is committed to championing engineering and technology education throughout the UK to increase the number and quality of engineers and technicians entering the workforce, while growing our economy through our engineering capital.

Join the IET to have a go at some fun engineering challenges. Try your hand at coding with our mini robot, BitBot, or get creative building your own vision of the 'World of the Future'. Could you be a future engineer?

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Sir Tom Finney Sports Centre Showfloor (continued):

#### Vision to Fly

Get ready for an unforgettable adventure in the world of aviation! Whether you dream of soaring through the clouds or zipping through obstacles like a pro pilot, this interactive experience will put you in the captain's seat. Perfect for kids and families, our two-part flying challenge is designed to thrill, entertain, and spark curiosity about the science of flight!

Pilot a Realistic Flight Simulator: Ever wondered what it feels like to be a pilot? Now's your chance! Step into our flight simulator and take control of a Cessna 172, one of the most famous training aircraft in the world. Using a realistic flight yoke system and rudder pedals, you'll get hands-on experience steering, climbing, and landing - just like a real aviator! Feel the rush as you navigate the skies, learning how planes take off, stay in the air, and land safely. Will you be able to keep your plane steady? Can you pull off a smooth landing? Buckle up and find out!

Mini-Drone Challenge - Beat the Clock: Now it's time to switch from pilot to drone racer! Test your flying skills with our fast and nimble mini-drones, weaving your way through hoops in the correct order - before the clock runs out! Can you beat the time and complete the course with precision? It's a test of speed, agility, and focus!

No experience? No problem! Our friendly instructors will guide you, making it easy for everyone - young and old - to take part in the excitement. Whether you're a future pilot or just love cool tech, this activity is a fantastic way to explore the science behind flight while having loads of fun. Come join us for this high-flying adventure and see if you have what it takes to be the ultimate aviator!

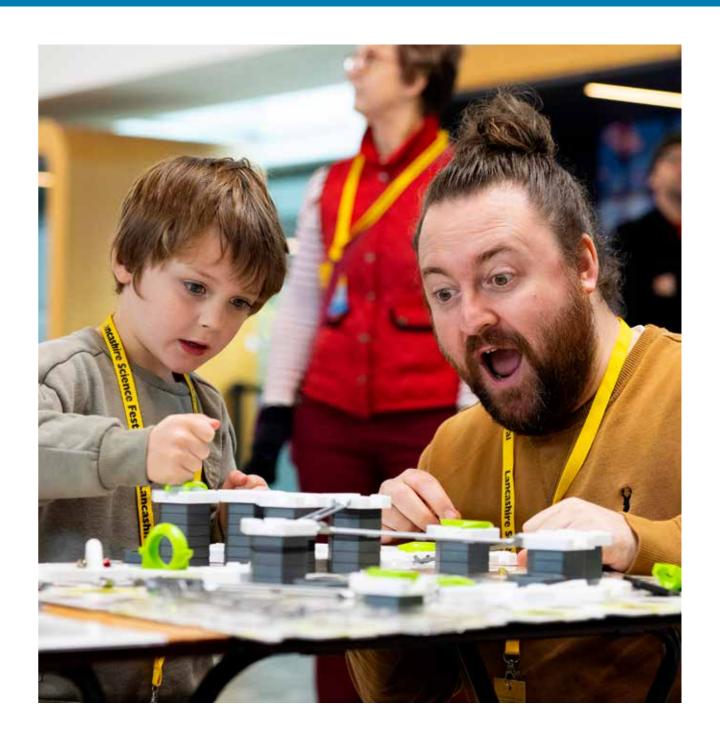
## What Does Science Have to Do with Archives?

Archives and science have more in common than you think! Whether it's the archives of scientific research, the science in archives or the processes involved in the physical material used to create them, science and historic records, or archives, are inextricably linked. Find out more with Lancashire Archives.

#### 3D Knot Puzzle

Also known as the Chinese Knot, this puzzle is a three-dimensional interlocking wooden puzzle. While its exact origin is unknown, it is one of the world's oldest and most popular mechanical puzzles. It consists of six uniquely shaped pieces, each with distinct cutouts that allow them to interlock and form the complete puzzle. Join the Confucious Institute to discover more and have a go!





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## **Showfloor**

# **Foster Showfloor**

Venue: Foster Social Space (Ground Floor)

Times: 9.00am-4.00pm (last entry 3.45pm)

#### From the Earth to the Moon!

From the Earth to the Moon! 60 Years of Human Spaceflight to the Moon - from Apollo to Artemis.

In the 1960s NASA grabbed the world's attention with its Apollo missions that took humans to the Moon. For more than half a century no-one has been back to the Moon, but now, in an exciting series of new developments, NASA is sending humans to the Moon again in the 2020s, through the Artemis programme.

Artemis I flew in 2022 as an uncrewed demonstrator mission and was highly successful in orbiting the Earth. Artemis II will fly with a human crew and will orbit the Moon before returning to Earth.

The crew for Artemis II has already been selected and will launch in Spring 2026: The first time that humans have travelled beyond Earth orbit in more than half a century.

Artemis II will recreate the Apollo 8 mission in leaving the Earth's orbit, undertaking a manoeuvre that will put it into what is called a 'transfer orbit' to take it to the Moon. It will then orbit the Moon several times before returning to Earth.

As Artemis II reappears after its first passage behind the Moon it will recreate the Apollo 8 iconic 'Earthrise' photograph of the Earth appearing to 'rise' above the surface of the Moon.

Through a series of displays, exhibits and talks, you will see and understand the history of human spaceflight from the Apollo space programme of the 1960s to the latest NASA Artemis programme of the 2020s that will return humans to the surface of the Moon before 2030.



Beyond 2030 NASA has plans for a human crewed mission to Mars. You will also learn about the history of robotic exploration of the surface of Mars and drive a model Mars Rover.

This is all brought to life through a series of exhibits, talks, displays, hands-on interactive activities, and culminating in building your own rocket in our Build-Zone.

This unique series of exhibits will bring to life 60 years of human lunar exploration.

Attractions include:

- See the largest model of a Saturn V rocket outside of a national museum
- Have a selfie with Neil Armstrong and Buzz Aldrin on the Moon
- See models of lunar landers and lunar rovers past and future
- Hear about the dramatic saving of the Apollo 13 astronauts
- Listen to Neil Armstrong as he talks to Mission Control while landing on the Moon
- Land your own rocket on the Moon using our simulators
- · Drive a Martian Rover on the surface of Mars
- Design and build your own Moon rocket in the Build-Zone

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## Join the conversation #LancSciFest



## **Showfloor**

# **Drop-ins**

Foster Showfloor (continued):

#### **Degree Apprenticeships**

Find out more about the Degree Apprenticeship route to university.

#### Preston and District Astronomical Society

Preston and District Astronomical Society is a friendly group of amateur astronomers that is welcoming to all. They have a rich local history dating back to the formation of the Preston Scientific Society in 1876. Head to the stand to use a telescope to safely observe the sun, learn more about meteorites and get the opportunity to handle one.

#### Polydron

The chance to come and play and explore the world of Polydron. The only thing that can hold you back is your imagination. Imagine, dream, and build...

#### Star Wars 99th Garrison

Get up close and personal with some of your favourite Star Wars characters. Pose for pictures with jedi, stormtroopers, and more! Keep a look out for members of the 99th Garrison as you explore the festival or meet them at either 10.30am or 2.30pm in our Foster Gardens.

They will be collecting optional donations for the Cystic Fibrosis Trust. Charity number (England and Wales):



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## The Eyes as Windows into the Brain (6+)

Venue: Foster Square Times: 10.00am-4.00pm

Visit the brand new Mobile Research Unit to explore the relationship between your eye movements and how your brain processes information during different everyday tasks.

We will be demonstrating this using fun experimental tasks like playing 'Where's Wally?'. We will record your eye movements while you complete the tasks using our state-of-the-art portable eye-tracking equipment - showing how your eyes really are a window into the brain.

# Professor Pumpernickel's Science Show (U)

Venue: University Square

Times: 11.00am-11.45am, 1.00pm-1.45pm

and 3.00pm-3.45pm

His mission - to enthuse all ages and abilities about science in hope of creating some of our future inventors, explorers and superheroes. If you like chaos, chemistry and unfathomable physics phenomena, you'll love Professor Pumpernickel.

#### Meet the Dinosaurs: Tyrone, Terry and Donna (U)

Venue: University Square

Times: 10.00am-10.30am, 12.00pm-12.30pm and 2.00pm-2.30pm

Children and grown-ups alike will be enchanted – and terrified - of our life-like puppet friends as they makes their way about your event, meeting their adoring fans. Despite the size of their wings and beaks, Terry and Donna have remarkably friendly demeanours – in fact, they'll come and introduce themselves in their own pteranodon language. You'll see! And Tyrone's Wrangler knows exactly when he's about to bite. We promise!

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your festival
your festival
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of your visit using
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the lanyard around
located around
the festival

#### Teddybear's Clinic (4+)

Venue: Greenbank Building, First Floor, Room GR171

Times: 10.00am-12.00pm and 12.45pm-4.00pm

Head to the teddy bear clinic in our exceptional clinical skills labs. Play the role of a children's nurse as you assess some poorly teddy bears using our equipment and bandage their injuries.

Feel free to bring your own teddy bear with you! You and your family will also have the opportunity to perform lifesaving CPR on our manikins. How effective are your compressions?

Additionally, you can build a more positive mindset by taking part in our 'Mirror Mirror' activity, where you'll reflect on your positive qualities, attributes, and characteristics.

#### **Emergency Heroes (U)**

Venue: Harrington Car Park Times: 10.00am-4.00pm

Join us as we welcome local emergency services to Lancashire Science Festival. Children get the chance to get an up-close look at the vehicles that help keep our community safe.

- Ambulance (4+): Step inside an ambulance and see how paramedics help people in need. Learn about the tools and equipment used to save lives. Guided tours will be taking place during the following times: 11.00am-12.00pm, 1.00pm-2.00pm and 3.00pm-4.00pm.
- Fire Engine: Discover the mighty fire engine! Explore the truck, try on some gear, and see how firefighters put out fires and rescue people.
- Police Car: Hop in the police car, see the sirens and lights, and ask officers all about their important work in keeping our streets safe.

Each emergency service vehicle will have friendly experts ready to answer any questions you may have. Whether it's about how the sirens work or what equipment they use, feel free to ask away! It's a fun, hands-on way for children to learn about these essential community services. They'll get to explore, ask questions, and maybe even get a little surprise along the way!

Please be aware that the emergency vehicles present at this event are working vehicles. They may need to leave the event at any time to respond to an emergency. We appreciate your understanding and cooperation.

## **Shows**

## Join the conversation #LancSciFest

Take a seat and enjoy a live performance or demonstration. See pages 22-25 for full show descriptions.

You do not need to pre-book; please arrive at the venue 15 minutes before the start time to receive a queue number.

Pushchairs and prams cannot be taken inside lecture theatres.



LOCATION	10.00-10.30am	10.30-11.00am	11.00-11.30am	11.30am-12 noon	12 noon-12.30pm	12.30-1.00pm	1.00-1.30pm	1.30-2.00pm	2.00-2.30pm	2.30-3.00pm	3.00-3.30pm	3.30-4.00pm
Foster Lecture Theatre 4	Bubble Science Show	4+		Bubble Science Show	4+		Bubble Science Show	4+				
Leighton Building Room 002					Bugfest	4+		Bugfest	4+		Bugfest	4+
Mitchell & Kenyon Cinema - Foster Building	Chemistry Unleashed	4+			Ghosts in the Machines	4+		Ghosts in the Machines	4+		Ghosts in the Machines	4+
Foster Lecture Theatre 2	Look Up!	4+				The Mouldy Miracl the Story of Penic			Look Up!	4+	Look Up!	4+
Leighton Building Room 003					Music to Your Ears	4+		Music to Your Ears	4+		Music to Your Ears	4+
Foster Lecture Theatre 3		Sparking Wonder	4+		Sparking Wonder	4+		Sparking Wonder	6+			
Darwin Lecture Theatre	This is A	/ L		This is Amazing Chemistry	4+		This is Amazing Chemistry	4+				
Adelphi Building Lecture Theatre 1	Building the Bat: Inside the Super's L	ab 4+		the Bat: ne Super's Lab	Ĉ.	Building the Bat: Inside the Super's	Lab 4+		MedVenture Quest	4+	MedVent Quest	ure 4+
Harrington Lecture Theatre	Do It Yourself	4+	3				Do It Yourself	4+			Do It Yourself	4+
Greenbank Lecture Theatre					The Science of Jurassic World	4+		The Science of Jurassic World	4+		The Science of Jurassic World	4+
	10.00-10.30am	10.30-11.00am	11.00-11.30am	11.30am-12 noon	12 noon-12.30pm	12.30-1.00pm	1.00-1.30pm	1.30-2.00pm	2.00-2.30pm	2.30-3.00pm	3.00-3.30pm	3.30-4.00pm

# We have a family ticket for Blackpool Zoo up for grabs!

Share your festival photos and videos on Instagram and tag us with @UniLancashire to enter our exciting competition.

Terms and conditions available at lancashire.ac.uk/LancSciFest



#### **Bubble Science Show (4+)**

Venue: Foster Building, Ground Floor, Foster Lecture Theatre 4

Times: 10.00am-10.45am, 11.30pm-12.15pm and 1.00pm-1.45pm

Did you know it's possible to make a square bubble? That soap films can hold their structure despite being 100x thinner than a piece of paper? Or that bubbles could power the world? How did an American man make a bubble that lasted for 340 days? Join our unique interactive bubble science show, which combines entertainment with education to make an unforgettable, informative and wondrous hour of STEM edutainment.

#### **Bugfest Crazy Creatures Show (4+)**

Venue: Leighton Building, Ground Floor, Room LE002

Times: 12.00pm-12.45pm, 1.30pm-2.15pm and 3.00pm-3.45pm

Meet and make friends with amazing minibeasts from all around the world in this entertaining family friendly show.

#### Building the Bat: Inside the Super's Lab (4+)

Venue: Adelphi Building, Ground Floor, Adelphi Lecture Theatre 1

Times: 10.00am-10.45am, 11.15pm-12.00pm and 12.30pm-1.15pm

Step into the world of superhero innovation! This engaging session explores the cutting-edge science and engineering that could bring Batman's iconic gear to life. From the advanced materials needed for his bulletproof cowl and armour to the biomechanics of creating a functional utility belt, we'll examine how fiction inspires real-world innovation.

Dive into the challenges of designing tech that balances strength, flexibility, and stealth, just like in Lucius Fox's laboratory. Perfect for curious minds, aspiring engineers, and Batman fans alike, this talk reveals how science can transform imagination into reality.

#### Chemistry Unleashed: Explosions, Reactions, and the Science Behind It All! (4+)

Venue: Foster Building, Ground Floor, Mitchell and Kenyon Cinema (Foster Lecture Theatre 1)

Times: 10.00am-10.45am

This exciting show takes you on a journey into the heart of chemistry - the science at the heart of many twenty first century advancements. In this talk we'll break down complex concepts into explosive, colourful and mind-blowing displays as we dive into the fascinating processes that make everyday materials come to life. Perfect for curious minds, this show demonstrates how chemistry is all around us - making the tool of science not just educational, but engaging and unforgettable!

#### Do It Yourself (4+)

Venue: Harrington Building, Ground Floor, Harrington Lecture Theatre

Times: 10.00am-11.00am, 1.00pm-2.00pm and 3.00pm-4.00pm

Dive into science and be ready to get hands-on with surprising experiments, shocking facts, and the odd explosion! This show is packed full of experiments for families to try at home as well as the Ri's trademark fiery demos. Join us as we learn how to build a rocket... and launch it!

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#### Ghosts in the Machines (4+)

Venue: Foster Building, Ground Floor, Mitchell and Kenyon Cinema (Foster Lecture Theatre 1)

Times: 12.00pm-12.45pm, 1.30pm-2.15pm and 3.00pm-3.45pm

Ghost hunting and science on the same billing! How ghost hunters use technology to find spooks, and how that tech really works. Even if the camera never lies, how are both we AND technology bamboozled by natural things? This IS a family show, so don't panic. We will not be invoking demons to join us. There are no chances of us encountering a real ghost... hopefully.

#### Look Up! (4+)

Venue: Foster Building, Ground Floor, Foster Lecture Theatre 2

Times: 10.00am-10.45am, 2.00pm-2.45pm and 3.15pm-4.00pm

Simon 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 or school and learn about what you can see if you only look up!



#### MedVenture Quest (4+)

Venue: Adelphi Building, Ground Floor, Adelphi Lecture Theatre 1

Times: 2.00pm-2.45pm and 3.15pm - 4.00pm

MedVenture Quest is an exciting, action-packed game show that takes participants on a thrilling journey through the amazing world of medicine and health! Teams of young contestants become health heroes as they solve medical mysteries, tackle body-based challenges, and race to unlock the secrets of science.

From diagnosing diseases to exploring the wonders of the human body, every round is filled with fun, learning, and discovery. MedVenture Quest inspires curiosity, teamwork, and a passion for wellness. Who will rise to the top and become the ultimate MedVenture Champion?

# The Mouldy Miracle: What you don't know about the story of penicillin (4+)

Venue: Foster Building, Ground Floor, Foster Lecture Theatre 2

Times: 12.30pm-1.15pm

Alexander Fleming is often cited as the 'father of modern antibiotic treatment' as well as being crowned with the achievement of discovering penicillin. But what did he really do? In 1928 the antibacterial properties of the mould, penicillium notatum, were discovered, but penicillin didn't become available for the public in the UK until 1946. What happened in that 18-year chasm? During this talk, we will peel back the veil of history, shine light on hidden heroes and resurrect some long forgotten (and some completely ignored) sleeping giants of chemistry.



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#### Music To Your Ears (4+)

Venue: Leighton Building, Ground Floor, Room LE003 Times: 12.00pm-12.45pm, 1.30pm-2.15pm and 3.00pm-3.45pm

Uncover the mysteries of what sound is, how you hear it, and how you turn it into music. We'll show you all sorts of unusual ways to make sound and music, including the ultimate 'hands-free' instrument and one you can play with a blowtorch!

#### The Science of Jurassic World (4+)

Venue: Greenbank Building, Ground Floor, Greenbank Lecture Theatre

Times: 12.00pm-12.45pm, 1.30pm-2.15pm and 3.00pm-3.45pm

Love dinosaurs? Then this is the show for you. Join author and science presenter, Jon Chase, for an entertaining exploration of the science behind the much-loved movie franchise that helped to change the way we see dinosaurs. Features roarsome raps and bundles of dinosaur facts; fun for all the family!

#### Sparking Wonder (4+)

Venue: Foster Building, Ground Floor, Foster Lecture Theatre 3

Times: 10.30pm-11.15pm, 12.00pm-12.45pm and 1.30pm-2.15pm

Join the Science Magician Dr Matt Pritchard as he shares and demonstrates what makes him go "Wow!" Along the way you'll meet strange shapes, scientific curiosities, and the quirky characters behind these discoveries. With play and wonder at the heart of this show, you'll come away not only learning new things but with an appetite to go on your own adventures of invention.

#### This is Amazing Chemistry! (4+)

Venue: Darwin Building, Ground Floor, Darwin Lecture Theatre

Times: 10.15am-11.00am, 11.30am-12.15pm and 1.00pm-1.45pm

A showcase of our favourite demonstrations by Dr Anna Kirkham and forensic science students from the School of Law and Policing. Prepare for your senses to be overloaded and your enthusiasm for chemistry ignited. We will introduce you to the amazing world of chemistry through a range of demonstrations, including chemical clocks, cold light, fire, whoosh bottles and many more.

Please be aware there will be bright flashes during some of the demonstrations.

# Workshops Pre-booked

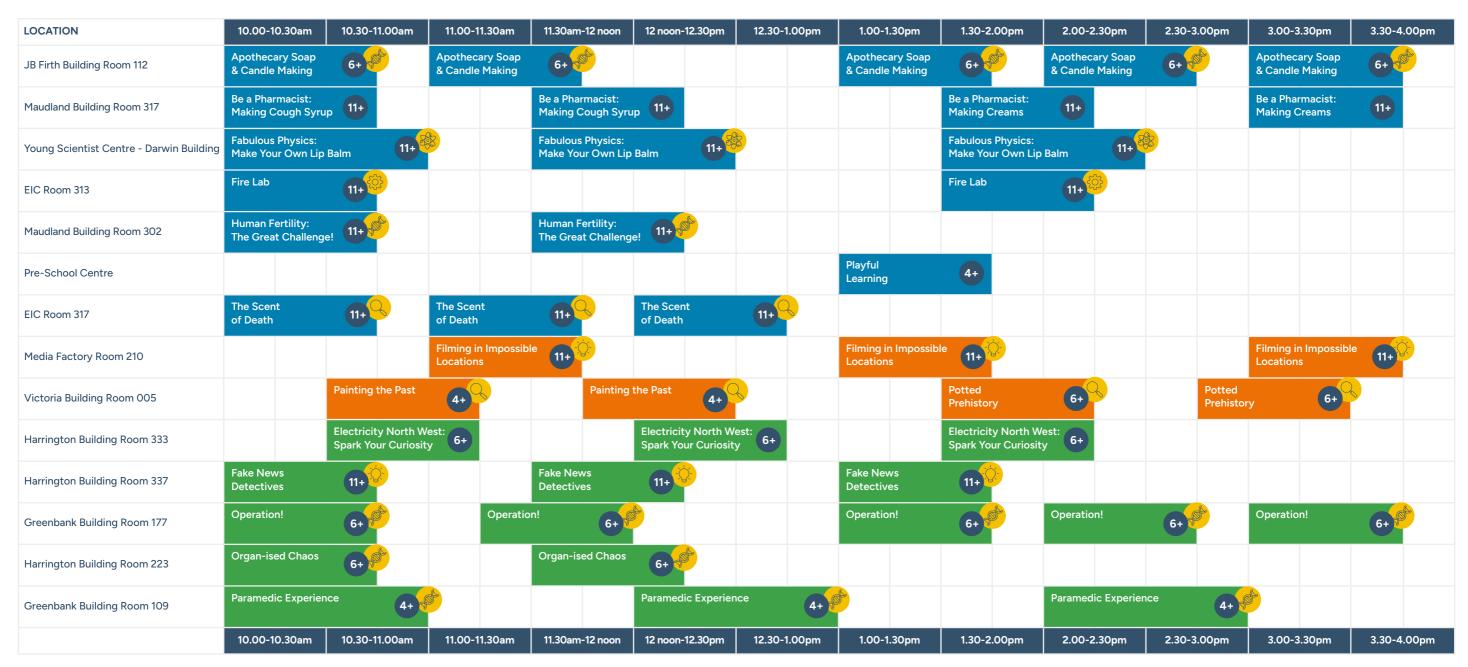
## Join the conversation #LancSciFest

All our workshops are fully booked today. If you have pre-booked on to a workshop, please arrive at the venue at least 5 minutes before the advertised start time.

Pushchairs and prams cannot be taken inside lecture theatres.

Late arrivals may not be admitted.







# Discover the subjects behind our Festival

If you or your future scientists have enjoyed the sessions you attended today, you can find out more about the subject areas and the different courses we offer by following the links below.

#### **Creative subjects**

Many creative subjects involve STEM skills. From architecture to journalism, the creative industries employ 2.4 million people across the UK. If you want to find out more about our creative courses visit lancashire.ac.uk/discover/arts

#### **Engineering**

Engineers design, test and build machines, structures and processes using maths and science. If you've enjoyed an Engineering session during your visit today, find out more about our courses at lancashire.ac.uk/discover/engineering

#### Health

Health is a huge subject area covering
Bio Sciences, Medicine, Nursing,
Midwifery, Sport Science, Pharmacy, Veterinary
Medicine and much more. To explore the
wide range of Health courses we deliver, visit
lancashire.ac.uk/discover/health

#### **Justice**

Did you enjoy a Forensic Science session today? Maybe you had a great time learning about the past and Archaeology. Or perhaps you got a chance to meet someone from the emergency services! If that's the case and you want to find out more about the courses we offer linked to Justice, just take a look at lancashire.ac.uk/discover/justice

#### **Physical Sciences**

Physical Sciences cover a broad range of exciting subjects. If you've enjoyed some of our Physical Sciences-themed activities today and you want to know more about some of our fantastic courses in this area, take a look at some of our subject pages:

Computer Sciences:

lancashire.ac.uk/computing

Maths: lancashire.ac.uk/maths

Physics and Astrophysics: lancashire.ac.uk/physics



Discover more by scanning the QR code or visiting lancashire.ac.uk/discover

# **Our Amazing Sponsors**



The University is proud to produce and host the Lancashire Science Festival, encouraging the sharing of ideas, knowledge, creativity and the spark of learning.

#### BAE SYSTEMS

BAE Systems Air Sector is at the heart of the UK's sovereign combat air capability, delivering combat air readiness and ensuring our Air Force customers have the equipment, services and skills they need to protect to maintain security and economic prosperity.

With more than 14,400 employees in the UK and a further 8,000 worldwide, we play our part in developing and safeguarding high value skills for the defence and aerospace industry and supporting our local communities. We're passionate about inspiring the next generation of scientists, technologists, engineers and mathematicians, and we're excited about the creativity and ambition of people who love to solve problems. By fostering inclusive and flexible work environments, we believe we can help our employees thrive and keep the UK competitive in the

We're recruiting over 650+ apprenticeship and graduate positions across Lancashire in 2025. Find a role that suits you, here: baesystems.com/earlycareers

# electricity

Electricity North West distributes electricity across the North West of England - from the rural communities of the beautiful Lake District to the bustling city of Manchester, and all the wonderful places in between. Our network of electricity cables brings electricity to your door, to keep your mobiles charged, your kettles boiling and your lights switched on. And we're working hard to educate our next generation of engineers, to support our customers who may need extra care in a power cut, and to facilitate the North West's journey to net zero.

We can only run the Lancashire Science Festival and keep our event free of charge with the support of our amazing sponsors. Learn more about our sponsors by visiting them on the Science Showfloors.



The Eric Wright Group is a long-established property and construction business comprising eight specialist divisions including construction, civils, water, facilities, developments, building homes, and operating care homes. Underpinned by a genuine belief in the value of establishing long-term relationships the Group's unique social focus enables us to consistently provide support and engagement within the communities which we live and work. Owned by the Eric Wright Charitable Trust, all profits are reinvested in the Group's growth or directed towards charitable activities, operating as a social enterprise that continuously gives back while striving for a more sustainable future. The Group significantly invests in training and education for young people, facilitating specialist training and developing life skills to support their learning and transition into work.



Fort Vale Engineering is a world leading, design and manufacturing company based in Simonstone, Lancashire. Offering a full range of components for the safe transport, storage and process of hazardous liquids, foodstuffs, powders and compressed liquefied gases. Being at the forefront of technological advances, developments in science and engineering are an integral part of the company

Fort Vale is dedicated to encouraging young people into science and engineering through their apprenticeship scheme, sustaining our future by creating yours.



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#ForThoseWhoDoMore **#IETCommunities** 



The Institution of **Engineering and Technology** 

# Children's University Learning Destination



The Lancashire Science Festival is delighted to be a Children's University Learning Destination. You will receive stamps for attending the festival. Visit check-in to collect your stamps for your learning passport.

The Children's University is an international critically acclaimed charity which encourages all children aged 5 to 14 years to try new experiences, develop new interests and acquire new skills through participation in innovative and creative learning activities outside of the school day.

Find out more at childrensuniversity.co.uk

# Interested in sponsoring the next Lancashire Science Festival?

By supporting the festival, you will be helping to inspire the next generation of scientists, engineers and inventors. The festival is free of charge through the support of our sponsors and in-kind supporters.

We reach a diverse audience and supporting the festival will not only help inspire the workforce of tomorrow but promote social mobility across the region. The festival has an extensive reach through visitors, social media and press exposure.

#### Get in touch!

We'd love to have a conversation with you about the festival. Contact Lancashire Science Festival Director, Dr Liz Granger using the details below:

LancSciFest@uclan.ac.uk
lancashire.ac.uk/LancSciFest





# Have you completed our Festival Trail?

Complete our Festival Trail by speaking with real life scientists and engineers, ask them to sign your trail card to receive your science sticker.

Trail cards can be collected and returned to the info desk in Sir Tom Finney Sports Centre.







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# Lancashire Science Festival 2025



First Aid Point

Check-in Point



AB Adelphi Building

**ME** Media Factory

**Orange Zone** 

OFS Oasis Faith and Spirituality Centre (Quiet Room and Prayer Room)

**VB** Victoria Building

#### **Blue Zone**

**DB** Darwin Building

**EIC** Engineering Innovation Centre

**FB** Foster Building

**FBLT** Foster Lecture

**2-4** Theatre 2-4

**FS** Foster Square

JBF JB Firth Building

**LE** Leighton Building

MB Maudland Building

**PSC** Pre-School Centre

STF Sir Tom Finney Sports Centre

#### **Green Zone**

GR Greenbank BuildingHA Harrington Building

HCP Harrington Car Park (Open for activites only - no parking)

#### **Red Zone**

STU Student CentreUS University Square

Food and Drink

information Point

#### **Car Parking**

University (Free of charge)

CP1 Fylde Road, PR1 2XN

**CP2** Computing and Technology, PR1 2XQ

CP3 Leighton, PR1 8RU

CP4 Roeburn, PR2 2QQ

CP5 Victoria I, PR1 7QS

CP6 Victoria II, PR1 7QS

Public Car Parking (Charges apply)

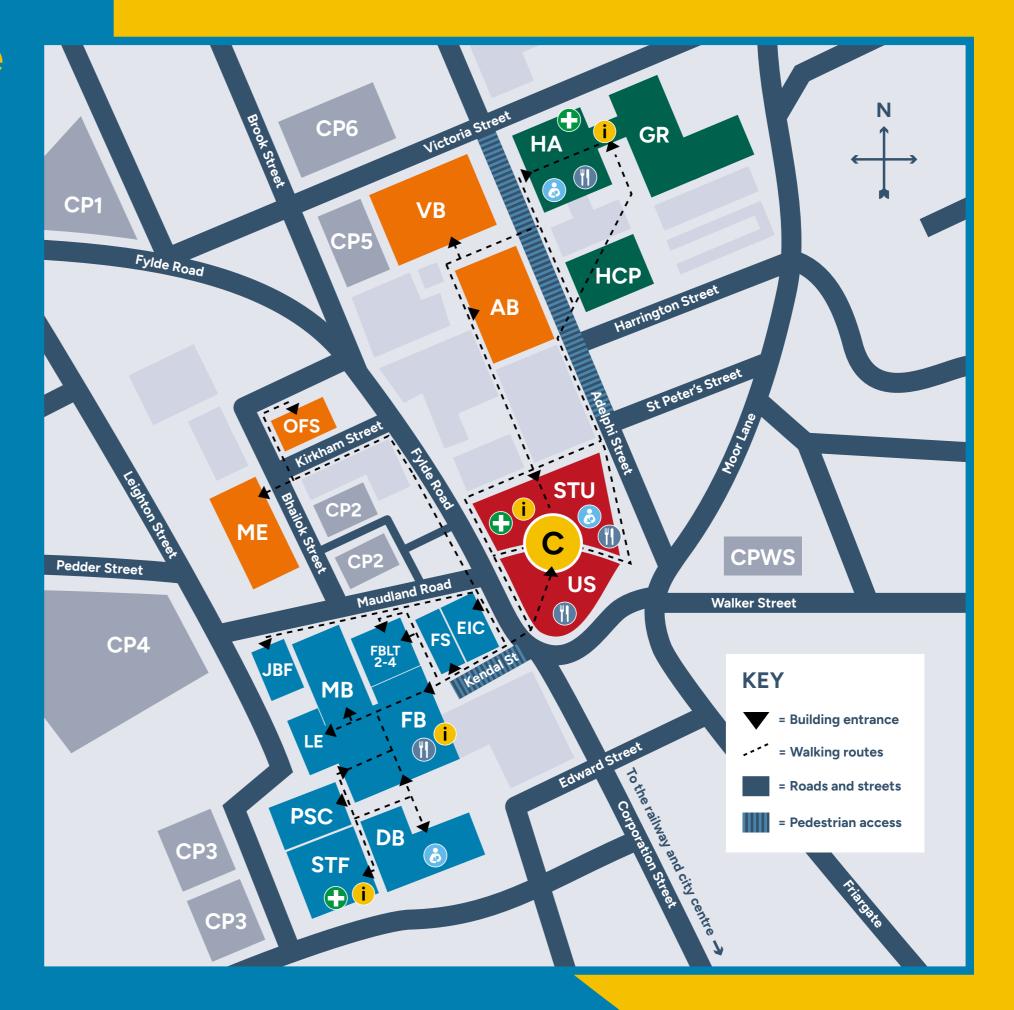
CPWS Walker Street
Car Park, PR1 2RQ

#### Walking times

STF to FB: 5 to 10 mins FB to STU: 5 to 10 mins STU to HA/GR: 5 to 10 mins



Scan to navigate our campus with MazeMap.



## Join the conversation #LancSciFest lancashire.ac.uk/LancSciFest









# Proudly changing to the **University of Lancashire**

