

BE CURIOUS 2020

an invitation to find out, explore, investigate



Saturday 28 March 2020
10am – 4pm
University of Leeds



UNIVERSITY OF LEEDS

Welcome to Be Curious 2020 at the University of Leeds.

Thank you for wanting to be a part of the great research that we do. The University, established in 1904, is one of the largest higher education institutions in the UK. We are renowned globally for the quality of our teaching and research. The strength of our academic expertise combined with the breadth of disciplines we cover, provides a wealth of opportunities and has real impact on the world in cultural, economic and societal ways.

Today we want to give you a glimpse of the research that is helping to shape our future world. We have lots of exciting activities and performances happening in the Parkinson and Michael Sadler Buildings and in the School of English throughout the day.

How to use this programme

This programme has a map and a guide of the activities taking place in the three buildings (Parkinson Building, Michael Sadler and School of English), performance information and details of what you can see in the galleries surrounding Parkinson Court.

This year we have four zones across the buildings with a mix of activities from all zones in Parkinson Court.

Caring for health

Supporting society

Inspired innovation
and discovery

Enabling sustainable lives



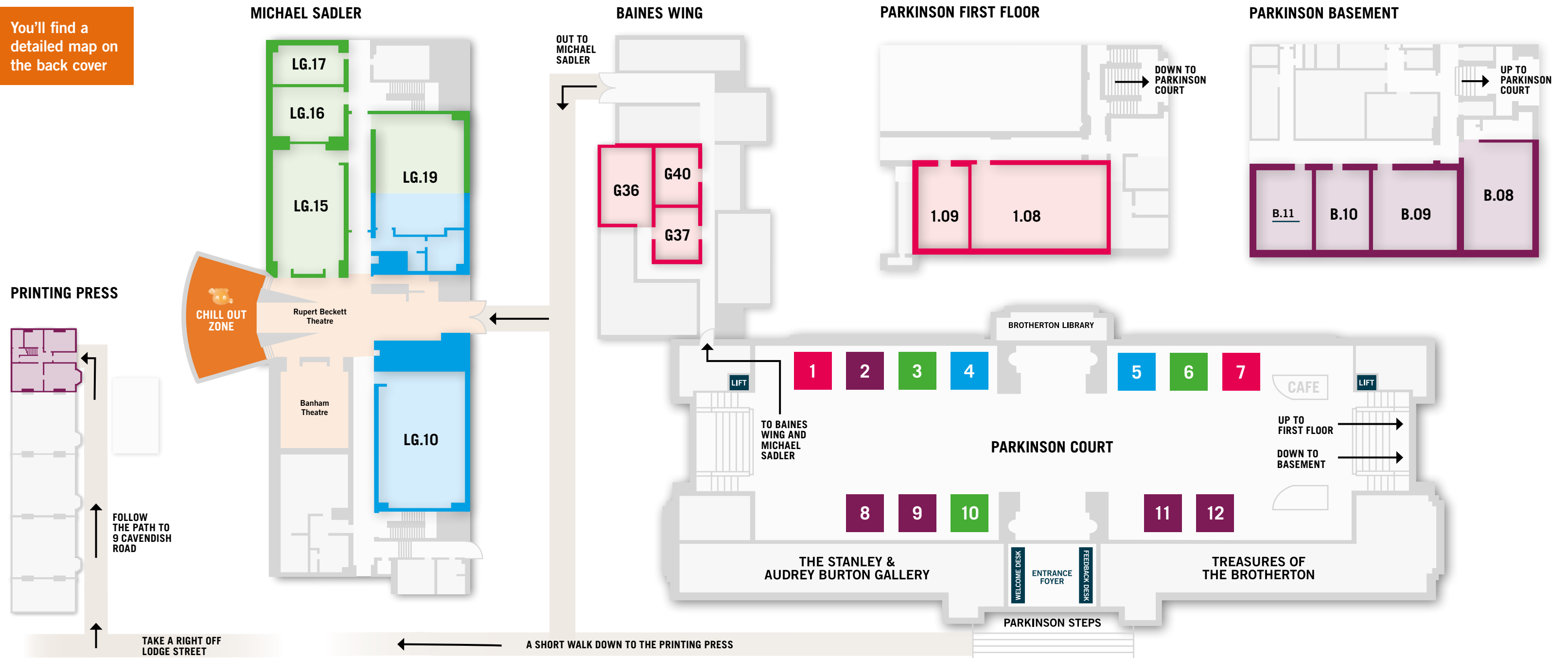
Children's activity

Curio, the curious fish, goes on an adventure! Grab a Be Curious passport and go hunting for stamps that you will find on some stalls. When you see Curio on a poster board that means you'll be able to get a stamp for your passport.

Open me up!

ACTIVITY MAP

You'll find a detailed map on the back cover



PARKINSON COURT

CARING FOR HEALTH

1. The mouth matters

Come and discover why our mouths matter! You can help fix decayed teeth, find out about being a dentist and even dress up for a photograph. You can also learn how to keep your mouth healthy and what we do at the Leeds School of Dentistry.

7. Medical innovation: from University research to global use

How does medical research at universities improve the lives of patients across the globe? See our keyhole surgery simulator, load a test rig for an external fixation device and find how many replacement joints our skeleton holds.

SUPPORTING SOCIETY

2. Find the artist!

We experience the work of artists every day by listening to music, reading comics, watching TV, sharing images, looking at paintings. But where are the artists? Guess where to find artists in the city and help us to solve this mystery. This game welcomes kids and adults to take up the challenge and discover more about what it is like to be an artist.

8. @artschool

Have you ever wanted to let your creative side loose? Join us as The Stanley & Audrey Burton Gallery becomes an art school for the day! Collaborate with others as you learn a new art technique, share your ideas or join a critique of an artwork. Don't forget to collect your graduation certificate on the way out!

9. Use maths and networks to discover more about your favourite cartoon

How do we determine who the main characters are in your favourite cartoon like Frozen, Dragon or Moana? We can use mathematics and computers to see who plays a key role in the social network of a story. The idea is to compute numbers called centralities, to measure who is more influential.

11. A look behind the scenes

Theatre and performance archives contain rich resources about society and culture, from stage management and technical files to publicity materials and personal archives of dramatists and choreographers. Join us as we take a look behind the curtain at designing for the stage.

12. A life less ordinary ... in the past

Come and find out what everyday life was like in past centuries and how it still affects us today. We have games, displays and hands-on things to do that appeal to all ages. Themes include weather patterns and making windmills, life in medieval Italy, religious ways of life, and ordinary places in modern Leeds with old histories.

ENABLING SUSTAINABLE LIVES

4. Campus in crisis!

Our campus is in crisis! Join us in this augmented reality game which introduces players to some key sustainability issues through interacting with characters from the future, when the campus is in crisis because of our actions in the past.

5. Celebrating the benefits of trees

Interested in trees? Want to know more about the amazing benefits trees provide for people and planet? Come and see the Leeds Tree Team to learn more about the value of trees and how we can measure it. If the weather is good, you can join us for a guided tree trail too!

INSPIRED INNOVATION AND DISCOVERY

3. How to walk on water and swim in honey

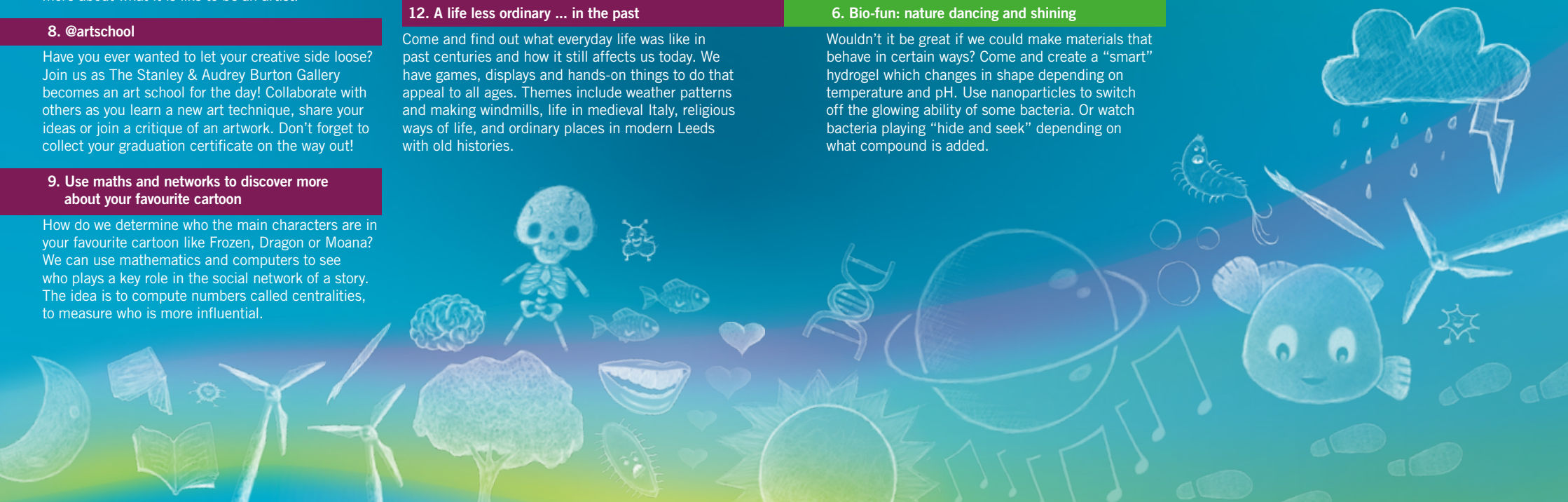
Have you ever wondered why you have to shake a bottle of ketchup before it will come out of the bottle? Or what makes honey so hard to swim in? Come along to our stall to get an explanation and see all the different types of non-Newtonian fluids that we could get our hands on!

6. Bio-fun: nature dancing and shining

Wouldn't it be great if we could make materials that behave in certain ways? Come and create a "smart" hydrogel which changes in shape depending on temperature and pH. Use nanoparticles to switch off the glowing ability of some bacteria. Or watch bacteria playing "hide and seek" depending on what compound is added.

10. Skin deep: stresses and strains of foot painting

Donate your footprint to science! By applying a speckle pattern on the sole of the foot and filming you walk, we can map how your skin deforms and calculate the strain you are putting it under. Can this tell us what is happening to our feet inside shoes?



PARKINSON BUILDING – FIRST FLOOR

CARING FOR HEALTH

1.08

Seeing the invisible: from disease to medicine

How do we study parts of the body that are too small to see? Come and find out how you can use proteins, crystals, X-rays and more to see the invisible tools that cells use. Discover how they change in illnesses and how we can design medicines to fix them!

Help us design a new medicine

We all rely on medicine to help us when we are ill but how are these made? Proteins in our bodies that are not working properly are often involved in causing disease. Here we will use computers to design a new medicine to help a protein work properly again and treat a disease.

DIY vaccines: how to assemble viral vaccines

Using 3D models, you can learn what makes a virus, explore the wide range of virus shapes and sizes, investigate how to kill a virus with anti-viral drugs and understand why vaccines are important. Then, have a go at designing your own virus models to take home.

Stop the superbugs!

What is a superbug? Why should we be worried? Share your knowledge to help our research, then join us for games and films to help everyone understand what superbugs are, and what simple things we can do to stay healthy.

Infection Detection – using engineering to control the spread of germs

How do germs move between people? How important is cleaning surfaces? What about germs in the air? Come and find out how we use sensors and computer models to understand how building design controls infection risk, and try our invisible infection experiment to see how far you can spread germs.

1.09

Faecal matters: the world within us

Explore the wonderful world of your gut microbiome including the microscopic bugs that help us stay healthy (you can also make your own bugs). But what happens when the microbiome is damaged? Find out how antibiotics can promote drug resistant bacteria and lead to diarrhoea with our microbiome and Poolette games.

How does your brain talk?

How does your body know when to move? How do nerve cells communicate and talk to each other? Here, we introduce the concept of nerve cell communication and the flow of information within the body using a variety of games.

Today we de-liver!

Whatever your age what you eat and drink has a big influence on your liver health. Come and discover how important the liver is in being healthy, how it helps digestion and regeneration. Make your own liver model and find out about our research on fatty liver and other diseases.



BAINES WING

CARING FOR HEALTH

G36

We will beat cancer

Over the last 40 years cancer survival rates in the UK have doubled due to research. Join us for conversations about our work, your own experiences and browse our five stalls: **The Chocolate trial** – a fun, informal version of a method to answer 'does it work?'; **Success stories** – people with cancer live longer; **Meet the team** – learn who makes cancer research happen and be part of the team; **The dignity tree** – dignity is a vital part of healthcare. Share what dignity means to you; **Are you a super taster?** – test your taste buds and discover the role that genes play in cancer and about how we adapt treatments to meet the needs of individual patients.

Health behaviours: the first defence against cancer

Find out how your behaviour can help to reduce your risk of cancer. Test your knowledge in our truth or myth game, guess the amount of sugar hidden in popular drinks or try out some simple exercises using resistance bands!

Be a health detective

Family doctors use many tests to understand what is wrong with a patient. Come and try listening to your own heart, spotting the difference in chest X-rays or finding the 'odd one out' blood test result. Meet our helper Brian the skeleton and speak to our researchers about the ways we are trying to help family doctors diagnose cancer earlier.

G37

Get pumped up about heart health: healthy living

Wanting to learn more about how the heart works? We have a human torso, heart model, and colouring waiting for you! We also have a blood vessel model. You as a superhero will crawl through the "tunnel" to catch the bad guys (biomarkers). This is how scientists discover new therapeutic targets!

A healthy heart is the key to beat heartbreak forever!

Our heart keeps us alive! Come and see how your heart carries out such an important job and join in lots of 'hearty' things; turning your smart phone into a microscope to see the miniature world inside each of us and use a stethoscope to listen to your own heartbeat.

Ultra-sound tests in health research

Always thought that ultrasound was just used in pregnancy? Want to squish a fat lump? Fancy drumming along to a heartbeat? Curious about just how much oxygen we contain? Then come and visit us to have these questions answered and find out more about the exciting research that the National Institute for Health Research in Leeds is doing.

G40

The gestation station

Join us to discover how we help to ensure there are more healthy pregnancies. Why not try your hand at our implantation game or take part in arts and crafts activities? Clinicians and midwives will also be on hand to tell you what it is like to work in a pregnancy clinic.



PARKINSON BUILDING – BASEMENT

SUPPORTING SOCIETY

B08

Discover the world of languages

Want to feel empowered and excited? Learn a language, or two! Discover more about being bilingual in today's global world. Try it out for yourself – learn some phrases in a new language or win a prize for guessing different language scripts.

Seeing the wood and the trees; decision-making, dilemmas and dementia

Did you know that we can understand different perspectives by thinking in different ways? See how thinking differently might help carers who make decisions for people who are living with dementia. Learn about abstract and concrete thinking, try our quiz, explore a dilemma and have a go at thinking differently.

Weather words

Why do we say 'it's raining cats and dogs'? People have always used language in creative ways to describe the weather. Be inspired by weather-writing from the past and write your own lines and phrases to add to our new, communal poems about different kinds of weather!

The benefit of simulations

How do we know in advance if a new transport system will work? We use simulations to explore how real life disruptions affect the system. Simulations also provide feedback on weak points in the system and allow us to understand the cause of a disruption, eg is it a shortage of bus drivers or busy roads that explains why the bus is late?



B09

Style: restyle

Do you own clothes you can't part with but no longer wear? They fit fine, but...! Come to our styling workshop with your clothing, ideas for where you'd wear them and mood pictures (favourite stars, scenes, etc). With little to no sewing, our fashion students will help you restyle, re-imagine and re-inspire.

Ordinary clothes / extraordinary stories

Get up close and personal with historic clothes from the Yorkshire Fashion Archive. Follow a series of clues to explore the extraordinary hidden stories contained within the stitching, fabric and even sweat stains of these seemingly ordinary clothes.

B10

How to rule a nation: sovereignty in the 21st century

Up for playing games? Here is a role-playing game where participants imagine themselves to be a ruler of a country. Participants are presented with challenges to their rule and are then given different options as to how to respond. What they decide will determine whether they can remain as ruler or fall.

Untold stories of the French Resistance

Come and discover the many faces of the French Resistance during WW2. Who were the women and men who fought for a country that often was not their own? Search our database, consult our interactive maps and become archival detectives to unearth untold stories from North and West Africa, South-East Asia, the Caribbean and the Pacific.

B11

How do we understand each other?

Are you curious about how we learn and process language? Take part in a range of experiments in language research. Try child language games aimed at under-7s and their families. Discover how you track speech tempo and understand accents. Visualise your vowel sounds to explore what makes up your accent!

CAVENDISH ROAD

SUPPORTING SOCIETY

ENGLISH

The power of print

Find out first hand why printing was such a radical invention and how it has helped shape society for hundreds of years. Meet the experts of Leeds Centre for the Comparative History of Print, and have a go at making your own print.

Not wheelchair accessible

MICHAEL SADLER

INSPIRED INNOVATION AND DISCOVERY

LG15

Curious astronomers

Curiosity might have killed the cat, but it is the cornerstone of many scientific breakthroughs. Explore the accidental discoveries that shaped our knowledge of the universe such as dark matter and the first exoplanet. Interactive space exhibit with 3D holograms and a chance to make and discover your own exoplanet.

Seeing things we can't see with sound we can't hear

Humans rely upon light and our eyes to see the world around us. But other creatures can see in total darkness. Bats use sound to see. Our research lets us see inside dark spaces in industry, and help humans to see and even cycle without sight.

MICHAEL SADLER

SUPPORTING SOCIETY

BEHIND RUPERT BECKETT

The building blocks of reading success

Chill out zone Looking for a space to relax and read? Or challenge yourself with fun activities and tasks - including mind mapping on tablet computers and figurative language games. We can even show you how people learn to read! We also have practical ideas for families to use when supporting reading at home.

LG16

Sticky scene for proteins: how strong will your protein be?

What does slime, springs and shaking balls all have in common? Expect to get messy turning liquid glue into goopy slime. See how fast you can shimmy and shake. Discover how to make the strongest network of springs, all to learn how these relate to proteins.

Bionano 4 life

Keeping people healthy is a global challenge. We develop unique tools to diagnose, study and treat diseases by harnessing and re-designing biology to work in new ways! Come and explore the world of the very tiny and help us invent the future of healthcare. Become a bionano scientist today!



MICHAEL SADLER

INSPIRED INNOVATION AND DISCOVERY



LG16

Bragg-ing about Leeds

Experiments by Professor Bragg in Leeds, a century ago, changed how we see the world at an atomic scale. Bragg's law and X-ray diffraction have underpinned breakthroughs, such as determining the structure of DNA. Today they have many practical uses and are key tools for science research here in Leeds.

Engineering food: from molecules to margarine

Eating is not just about taste, it is an experience involving all senses! Find out about the different ways to experience food with its chemical and physical properties. We will measure the sound of crunchy foods, identify "smelly molecules" and explain why salt and sugar look so similar but taste so different!

LG17

Energy and life

Breathing by living organisms uses similar principles as batteries and fuel cells. A microbial-fuel cell is a bio-electrochemical device that convert organic 'fuel' directly into electricity by breathing bacteria. In this art display a microbial-fuel cell is used to power a light sculpture.



LG19

How to decode the secrets of our genome

Everything our body is made of is written in our genome, in small 'messages' – our genes! These messages have to be decoded so that we can live, eat, think and be healthy. Come and join us in exploring the genes of humans and flies! Let's find out what happens when the 'messages' are not properly read...

Bubble trouble: the science of soaps

Find out about the science of soaps. Soaps contain chemicals known as surfactants, these do more than just clean and they play an important role in different products, ranging from food to make up.

The science of wiggling: movement without legs or wheels

What can artificial robots learn from how tiny worms move? Observe the worms' behaviour under a microscope, explore our computer model playing a game and then build your own paper robot to take home!

Crystallisation in the real world: from chalk to chocolate

Using the power of crystallisation, we will change the structure of chocolate in just seconds! But can you taste the difference? We'll also reveal the microstructure of familiar household materials (and bugs) in our electron microscope to give an insight into the exciting materials research activities going on at Leeds.

MICHAEL SADLER

ENABLING SUSTAINABLE LIVES



LG10

Living with earthquakes and volcanoes

Come and experience earthquake and volcano research hands-on: watch liquefaction happening, build an earthquake-resistant structure, record your own earthquake, make bubbles in volcanic conduits, listen to volcanic tremor and understand why forecasting is difficult and what can be done to decrease the risk.

A journey to food safety

Wondering if the foods you eat are all good for your health? We will show you our research for keeping food safe: you will see the origin of some toxic things we find in foods, we will show you how we detect them and you will choose the safer potato chips.

How to foil an alien invasion!

Invasive alien species can be extremely damaging to the environment. We show you how to spot hazards and how to use biosecurity to stop the spread.

The surprising value of food waste

Over a third of food produced globally goes to waste. Fruit and vegetables are leading the food wastage. In China alone, every year the food wastage of mandarins (citrus fruit) is equivalent to the weight of 2 million elephants. Come and find out about the impact of food wastage on the environment and help us reduce it.

Discovering sustainability

Interested in the links between butterflies, bees, wasps and wellbeing? Want to investigate the role of collective urban gardening practices in creating sustainable communities? Keen to explore how art contributes to identity? Find out about some of the research solutions for a more sustainable future.



LG10

Build your zero carbon future

Learn how University of Leeds researchers are leading the fight against climate change by adding robust data to Makertopia's spectacular interactive model city of the future. Get hands on to reduce carbon emissions by making changes to behaviour, energy demand, transport, buildings and through restoring the natural environment.

Cleaning up pollution with nanoparticles

Nanoparticles can be used to treat polluted water. Make calcium carbonate crystals by mixing two liquids and watch as contaminants are taken up by the particles and settle out.



LG19

Under the lens

Find out about the tiny things we cannot see with our naked eye by using a microscope or two. What's in pond water? How does an electronic circuit look close up? And be surprised that the microscope gets bigger the tinier the things that you would like to see.

Recycling nuclear fuel, simulations and experiments

Find out how we make nuclear power better and safer for future generations and get hands-on with radiation shielding using replica nuclear materials.

Portable solar charger

No socket to charge your phone? Use the sun to charge your phone with our optimized solar powered charger. Depending on weather conditions, a lamp might be used to imitate the solar effect indoors.

PERFORMANCES

DEEP OCEAN LAB

Presented by Greg Foot (Science Journalist on TV, Radio, YouTube and Podcast)

What happens as you dive further and further into the deep, dark ocean? Join YouTuber and BBC TV and Radio Presenter Greg Foot for the story of his scientific adventure to the deep. With experiments and stunning videos, Greg will show you the high-tech submersibles that took him down a crazy 1000ft into the Twilight Zone. He'll explain the importance of our oceans, and – thanks to Greg's work with the Blue Planet II team – uncover the effect we're having on them. You'll also get the chance to meet a creature from the deep!

1pm in Rupert Beckett Theatre, Michael Sadler Building, 60 min duration

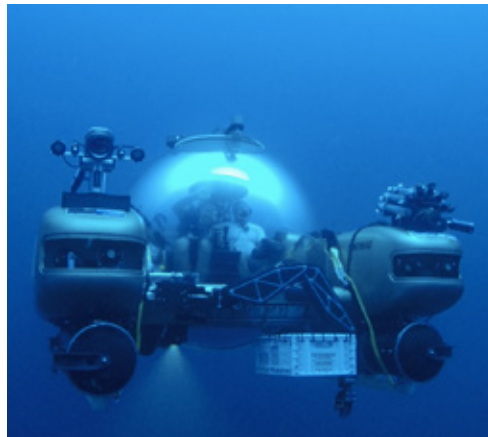
This performance is free but requires a ticket. If you booked online please exchange your confirmation for a ticket at the event desk at the entrance of Parkinson Building. If you did not book online, please go to the above desk and collect a ticket on a first come first served basis. The desk will close at 12:50pm.

SKYLAR'S MISSING NOTE

'Skylar's missing note' is a music and theatre experience primarily aimed at key stage 1 children (5–7). It tells the adventure of the main character, Skylar, whose piano has lost its middle-C key during a house move. This immersive piece of storytelling will not only introduce children to the piano in a fun and engaging way but is also designed to enhance the music curriculum. It is a collaboration between the Leeds International Piano Competition and Leeds-based Manic Chord Theatre.

11:30am and 2:30pm in Banham Theatre, Michael Sadler Building, 45 min duration each

No tickets required, however seating is limited and once the performance is underway no further entry is possible.



PLAYING YOUR PART: THE FUTURE OF CLIMATE CHANGE

Imagine your future with climate change: will you be a gardener, a hero, an explorer? Plan for the future and decide where to live, what to build and even what to study. Get involved in this improvising street theatre style performance that links science, planning and adapting to climate change.

10:45am, 12:30pm and 1:30pm in Banham Theatre, Michael Sadler Building, 15 min duration each

No tickets required, however seating is limited and once the performance is underway no further entry is possible.

FLASHMOB WITH A DENTAL THEME

Be surprised when our dentists start dancing in Parkinson Court.

PHOTOGRAPHY

Photography

Please note that we will be taking photographs at this event. These images will be used for marketing purposes by the University of Leeds. By entering the event you agree to have your photo taken. If you prefer not to have your photo taken, then please take a yellow lanyard from the entrance foyer in Parkinson and place it around your neck. This way we know not to use your image for marketing purposes. Please return the lanyard to the box when you leave.

For photographs of children we will require the written consent of the accompanying guardian (image consent form). We will never publish names with photographs.

You are welcome to take your own photos of the event, but please be courteous and aware of taking photos of others not in your party.

Thank you for your cooperation.



BEYOND BE CURIOUS

Disabled access – lifts

There is lift access to all our venues throughout the campus. If you have access issues, please raise this with a student guide (red t-shirt) and they will help and show you the disabled access route.

Toilets and baby changing facilities

There are toilets located across campus, which are highlighted in each venue. The main toilets in Parkinson Court are on the lower ground floor and can be accessed by the stairs or lift on either end of the court.

Baby changing facilities are located in the toilets in Parkinson Court and Baines Wing.

Safety

Adults bringing children under the age of 18 are reminded that they must stay with them throughout the event.

We are not expecting a fire alarm test today, therefore if you hear the alarm, please follow either the student guides or members of staff out of the building via the nearest fire exit and do not return to the building until instructed to do so.

If you require first aid assistance at any time throughout the event, please inform a student guide (red t-shirt) or a member of staff and they will assist you. If this is not possible, please phone University Security on **0113 3432222** and explain where you are and they will assist you.

Information points

The main information point is located in the centre of Parkinson Court. Should you need any assistance, additional student helpers can be found in Michael Sadler building and Baines Wing. Student guides are on hand throughout the day, you can identify them by their red t-shirts with a University of Leeds logo.

Feedback

We are keen to hear what you think of Be Curious 2020 today and you can let us know on your return to the feedback desk in Parkinson Foyer.

The data we gather is to make sure we understand the success of our marketing and whether we achieve our aims with this event. We will not pass on or share data with third parties we collect today.

Café

There is a café open in Parkinson Court where you may purchase drinks and snacks during the event.

Parking on campus

If you have parked your car on campus you need to pay the required fee at the payment machine on level 1 of the multi storey car park before you exit. This must be paid by debit/credit card. If you fail to pay, you will receive a fine through the post as registration plate recognition cameras are active on all car park exits.

Thank you to the Wellcome Trust and other collaborators across the city and region for kindly supporting this event and to all the staff and students involved in coordinating and delivering the event together.

If you like Be Curious, why not try our other free offers and opportunities?



University galleries

The Stanley & Audrey Burton Gallery is an oasis of calm, inspiration and art, just a short walk from the city centre. The Gallery offers innovative temporary exhibitions and displays treasures from the University Art Collection. The Collection includes stunning examples of European and British painting, drawings and prints, dating from the 17th century up to the present day.



The Treasures of the Brotherton Gallery is the public face of the world renowned Special Collections held at the Leeds University Library. The permanent display contains many highlights including Shakespeare's First Folio, original material written by the Brontës, stunning illuminated medieval manuscripts and rare books from across the globe.

Free online courses and programs

The University of Leeds offers over 55 free online programs and courses on a diverse range of topics. From anatomy, climate change, World War I and theatre history to atmospheric chemistry and transport systems, there is at least one course you may like. Search our offer on the FutureLearn platform and explore a new and different way of being curious www.futurelearn.com/partners/university-of-leeds

International Concert Series

A rich and varied programme of music offering students, staff and members of the public the opportunity to hear a range of the finest classical and contemporary music. The Concert Series is committed to quality and continues to employ high-calibre professional musicians. Concerts are directly related to the teaching and research outputs of the School of Music and other areas of the University. All concerts take place in the Clothworkers Centenary Concert Hall unless otherwise stated and the vast majority of concerts are free. See our current programme concerts.leeds.ac.uk/whats-on

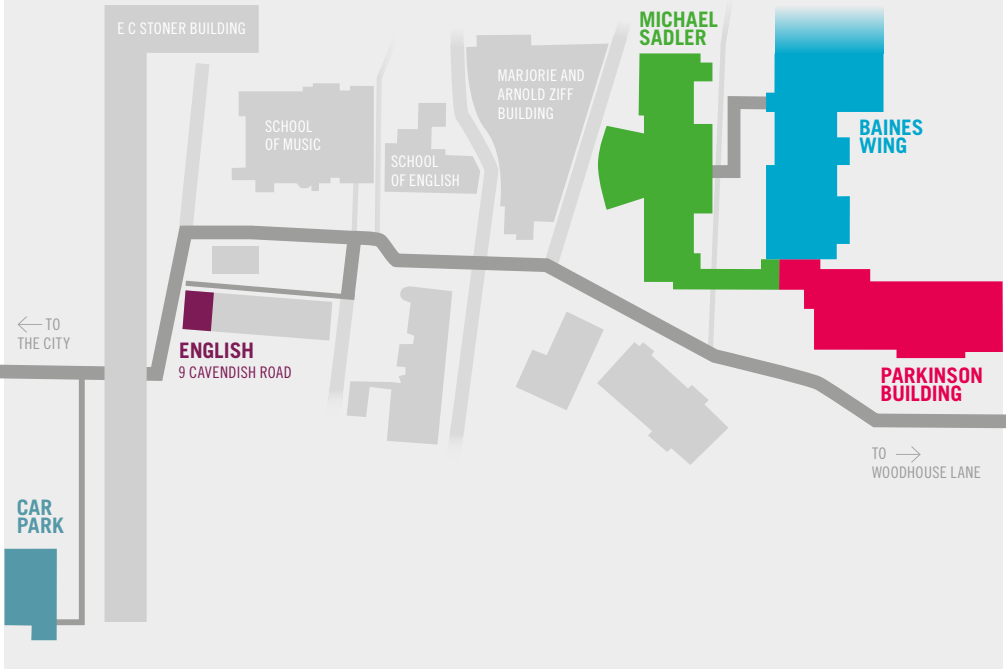
Around campus

The University of Leeds is a creative community with a rich cultural life, offering many opportunities for you to get involved or immerse yourself in the arts. Check out our Public Art trail, our theatres, museums and all other events www.leeds.ac.uk/aroundcampus

News

And if you want to keep abreast with the research here at Leeds, why not make it a habit to read our news www.leeds.ac.uk

BUILDINGS GUIDE



UNIVERSITY OF LEEDS

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