FREE ENTRY

SUMMER SCIENCE EXHIBITION

30 JUNE – 5 JULY 2026

PROGRAMME

THE ROYAL SOCIETY

Opening times

TUESDAY 30 JUNE
6pm – 10pm (18+ only)

WEDNESDAY 1 JULY
10am – 4pm

THURSDAY 2 JULY
10am – 4pm

FRIDAY 3 JULY
10am – 4pm

6pm – 8pm (18+ only)

SATURDAY 4 JULY
10am – 6pm

SUNDAY 5 JULY
9.30am – 6pm

Last entry is 30 minutes before closing.

Scan the QR code to view the full list of talks and activities.

General information

Photography

Photography and filming may take place during this event. If you do not wish to be photographed or filmed, please collect an orange 'no photography' sticker from the Information desk. If you wish to use photography or filming equipment at the exhibition, remember to respect other visitors and avoid capturing those wearing a 'no photography' sticker or who are under 19 years old.

The Society's privacy policy can be viewed online at: **royalsociety.org/privacy-policy**

Accessibility

We strive to make the exhibition as accessible to everyone as possible, including large print programmes and portable seats. All exhibits, activities and talks have step-free access. Please speak to a member of staff if you require any assistance. Talks have live subtitles and are recorded for later broadcast on our YouTube channel.

Large print programmes are available from the information desk.

A quiet room is also available – please speak to a member of staff at the information desk for details.

Staff

Our exhibition team, identifiable by a red 'staff' t-shirt, are always available to help. Should you need assistance, they are present around the building or please visit the information desk located in the Marble Hall on the ground floor.

Welcome

We are delighted to welcome you to the 2026 Summer Science Exhibition.

The 13 exhibits in this year's programme will take you on a great journey. You'll meet scientists working with the most advanced telescopes to unravel the mysteries of the universe, find out how lightning works, discover cutting-edge medical research and much more.

Throughout the week there is an extensive programme of talks and panel discussions, featuring leading scientists, writers and broadcasters on many topics, from the future of nuclear energy to the science behind a cup of coffee. We'll also be celebrating the 100th birthday of Sir David Attenborough FRS with a programme of conservation and wildlife-related talks and documentaries over the weekend.

You'll find hands-on activities featuring Royal Society-funded researchers and partners over the weekend, and from Wednesday to Friday we welcome back the Young researcher zone, where you'll meet students from across the UK who are working with scientists as part of the Society's Partnership Grants scheme.

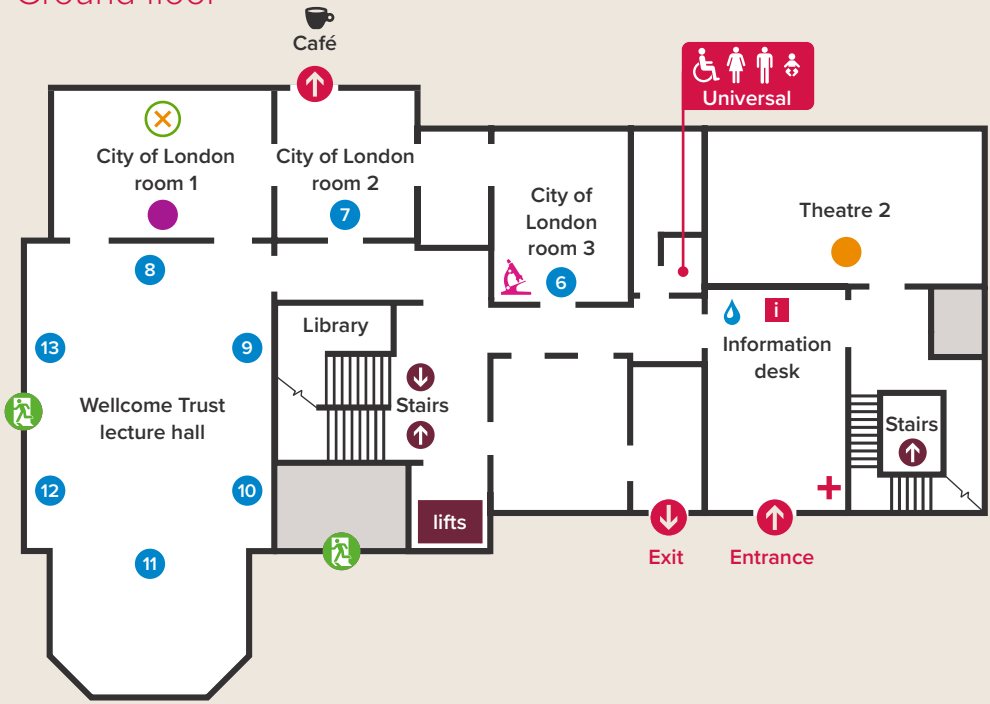
There's much to explore and discover at the exhibition – I hope you find your visit inspiring and fun.

Paul Nurse
President of the Royal Society

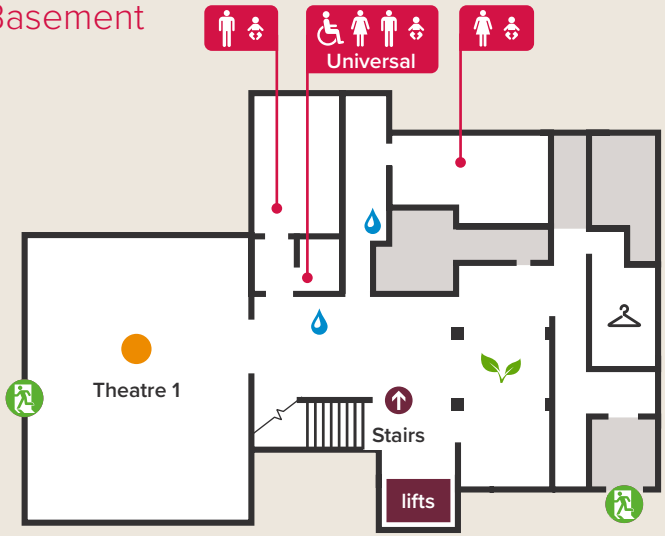
royalsociety.org/summer **#summerscience**

Map

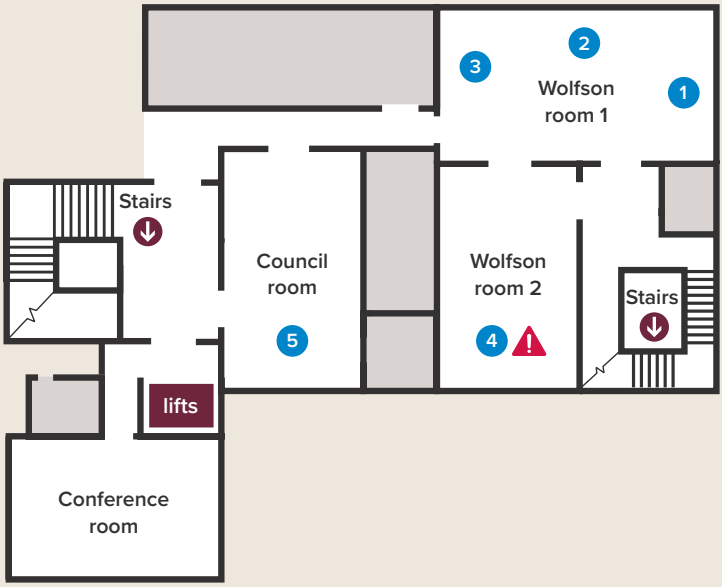
Ground floor



Basement



First floor



- Exhibits
- Young researcher zone (Wednesday – Friday)
- Talks
- Drop-in activities (Saturday – Sunday)
- History of science exhibition: the beauty of the Earth
- The fragile lens

General information

- Café
- Toilets
- Accessible toilet
- Baby changing facilities
- Cloakroom
- Water fountain
- First aid room
- Emergency exit
- This room contains a Tesla coil which may not be suitable for all visitors. See page 7 for details.

Exhibits

First floor

1

The art of resilience for successful ageing

Social connection, creativity, and optimism could be key to maintaining good brain health, wellbeing, and independence as we age. Meet the team using science to create practical, personalised guidance to help people mitigate risks relating to ageing such as dementia, depression, and loss of independence, and use their successful ageing tool to explore how small lifestyle changes could directly impact how you age.

2

Laser-focussed on science for radiotherapy

Laser-driven radiotherapy has the potential to make cancer treatment more efficient and accessible, and reduce complications. Cancer is the most common cause of death in the UK; and its incidence is increasing. Today, radiotherapy is used in 50% of cases and is instrumental in 40% of cures. Meet the researchers from the LhARA team and learn about how laser beams can advance science and change the lives of cancer patients.

3

Revealing the cosmos with the Simons Observatory

The telescopes at the Simons Observatory are seeking answers to our biggest cosmic questions, from how the Universe was formed to what its constituents are today. Cosmic microwave background is radiation that filled the Universe during its infancy 13.8 billion years ago, but has been stretched by the expansion of the Universe. Come along and see how the Simons Observatory is using this ancient radiation to unveil the secrets of the Universe today.

4

Thunderbolts and lightning

Lightning is one of nature's most destructive forces, with over 3 million lightning strikes hitting the Earth every day. But do we know if lightning occurs on other planets? What happens when an aeroplane gets struck by lightning? How is the UK's electrical grid protected from lightning strikes? Join scientists from the Lightning Laboratory at Cardiff University to explore these questions and watch sparks fly as they use Tesla coils to demonstrate how lightning behaves.

This exhibit uses a Tesla coil, which will be operated approximately every 20 minutes, with the following hazards when in operation: high voltage output, loud noise, low level production of ozone, low lighting levels, production of electromagnetic fields and strobe lighting that may affect visitors with photosensitive epilepsy.

Pacemaker users should not enter this room when the Tesla coil is in operation.

Ear defenders are available if required. Please ask a member of staff for further information.

5

Microbe zoo

Complex communities of tiny microbes live all around us and even in our bodies. The Microbe zoo is a chance to meet microbiologists and shrink down to microscopic scale, travelling through the soil, the human gut and rivers. Learn how microbes help keep us and the environment healthy, and what can happen when these communities get out of balance.

This activity lasts approximately 15 minutes. Groups of 8 – 10 visitors will be admitted every 5 minutes.

Exhibits

Ground floor

6

Shifting sands: when solids flow and liquids jam

Granular science shapes our world. From skyscraper construction and natural landslides to precise medical doses, granular materials are everywhere. Yet, they remain tricky to understand, shifting unpredictably between solid and liquid states. Explore how mastering the physics of grains makes transport safer, manufacturing more efficient, industrial processes more sustainable, and natural disasters easier to predict.

7

From our lab to your home: 25 years of formulation engineering

From the smooth melt of ice cream in your mouth to the fizz of a bath bomb, the way everyday products are formulated shapes how they look, feel and behave. Discover the science behind these familiar sensations with researchers from the Centre for Doctoral Training in Formulation Engineering. Journey through 25 years of innovative work revealing how the products you use day-to-day get from the lab to your home.

8

Immortalising natural history in 3D

Museums around the world hold millions of specimens essential for understanding the history and diversity of life on Earth. Yet physical specimens are fragile and can degrade and eventually be lost. Meet scientists using 3D imaging technology to immortalise museum collections. From reconstructing extinct organisms to running virtual experiments, discover how these new tools will enable unprecedented access to specimens normally behind glass.

9

Supercomputers: the good, the bad and the beautiful

Supercomputers play a vital role in tackling major global challenges, including cutting carbon emissions and advancing climate research. But these machines come with their own environmental cost, including high demands for energy, cooling, and water. At EPCC, researchers are working to change that. Discover how they're designing more sustainable systems to help ensure that the benefits of supercomputing outweigh the environmental impact.

10

Nanomaterials: a giant leap for healthcare

Discover how nanoparticles, invisible to the naked eye, are revolutionising healthcare and becoming powerful tools in diagnosis, imaging and treatment, with scientists from UCL. Explore how nanoparticles generate the coloured lines seen in diagnostic tools such as the lateral flow tests used for COVID-19, and view cancer fighting nanoparticles through an infrared camera to reveal how this research is helping address real-world healthcare challenges.

11

Hands-on, hands-off and hand-in-hand: the future of robotic assembly

Robots will transform the way we build, recycle and manufacture in the future. But even tasks that seem simple for humans require the ability to sense, plan and perform actions in the physical world that are among the major challenges for today's AI and robotics. Meet the leading researchers at the Oxford Robotics Institute, test your building skills with Frank the Robot, and explore ways of making more human-like robot problem solvers.

Exhibits

Ground floor

12

Universe makers

Cosmologists are using some of the largest supercomputer simulations ever to recreate how galaxies form and to deepen our understanding of the universe. Take an interactive look at how scientists model our universe on this extraordinary scale, run your own simulations of the cosmos, flying past stars, galaxies, black holes and planets, and see how mysterious dark matter and dark energy shape the rich diversity of structures we observe today.

13

Euclid, the dark universe detective

The ordinary matter we see — stars, galaxies, planets, and even ourselves — makes up only 5% of the Universe. The rest is mysterious dark matter and dark energy, invisible and largely unexplained by current physics. Join the team on an ambitious mission to map one third of the sky in unprecedented detail with the Euclid space telescope. Acting as cosmic detectives, they are searching for clues to unravel the secrets of our ‘dark Universe’.

History of science exhibition: the beauty of the Earth

This year, we celebrate the centenary of the great communicator of science in the natural world, Sir David Attenborough FRS. The Royal Society’s archives document our fascination with living things, from the smallest of pond life, to the largest of mammals, and the ecosystems in which they live. An exhibition, but also a birthday gift in leaves, scales, feathers, and fur.

Young researcher zone

Wednesday – Friday

Schools and colleges across the UK are conducting fascinating research as part of the Royal Society's Partnership Grants scheme. Discover more about their projects, from investigating school biodiversity and air quality to exploring space science, clean energy, and medical research.

Refreshment break?

Visit our café for a break during the exhibition. Serving a tasty range of food and drinks, it is a great way to reflect and relax for a while.

The café closes 30 minutes before the exhibition each day. Food and hot drinks are not allowed around the exhibition.

Discover more

Sign up to our public newsletter to hear about the Society's events and other news, or visit **royalsociety.org/events**

Talks and activities

To find out more about the packed line-up of talks, panel discussions and screenings covering topics ranging from climate change to cosmology, pick up a daily programme sheet from the information desk or scan the QR code.

Tuesday 30 June

Theatre 1

Time 6.45pm – 8pm

The World, the Universe and us

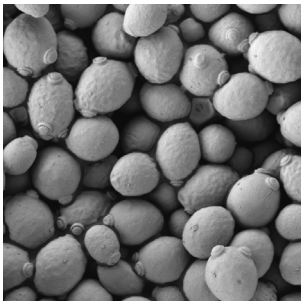
Can science win the World Cup?

In this live edition of *New Scientist's* award-winning podcast, host Rowan Hooper is joined by expert guests to find out how sports medicine, neuroscience and data science might play a role in the success of the eventual winners at this summer's World Cup finals.

Wednesday 1 July

Theatre 1

Time 1pm – 1.30pm



Under the lens

The edible chemistry of baking

Join baker, chemist and 2023 *The Great British Bake Off* finalist Dr Josh Smalley to find out about the fascinating chemistry at work every time we bake.

Thursday 2 July

Theatre 2

Time 3.20pm – 4pm

Science on screen

A panel of scientists and cinephiles, including Professor Anne Simon, science advisor on *The X Files*, join Helen O'Hara, editor-at-large of *Empire* magazine, to examine the films that got science right, and the ones that didn't.

Friday 3 July

Theatre 1

Time 2pm – 2.40pm

From wardrobe to water

The impact of fast fashion on ocean health

Professor Mark Miodownik, Royal Society Professor for Public Engagement in Science, and a panel of experts in marine science and sustainable fashion explore the link between fast fashion and ocean pollution.

Saturday 4 July

Theatre 1

Time 3.20pm – 4pm

The art of uncertainty

Sir David Spiegelhalter OBE FRS and Bobby Seagull discuss the role that luck, chance and coincidence play in our lives, and how understanding probability can help us think more analytically about the world around us.

Sunday 5 July

Theatre 2

Time 3.20pm – 4.20pm

Sir David Attenborough

A lifetime of wildlife

Broadcaster and journalist Samira Ahmed chairs this discussion to celebrate the life, work and legacy of one of the Royal Society's best-loved Fellows and examine the radical changes the planet has undergone throughout his remarkable life.

Daily broadcast

1 – 5 July, 7.30pm BST

Want to continue discovering amazing science after your visit today? From the science of baking and AI to the calls of wildlife and chemistry of everyday life, join us on YouTube every evening of the Exhibition for a highlight talk of the day.

The full programme of talks from the Exhibition will be released on YouTube over the coming weeks and months. To be first to hear about our latest videos and livestreamed events, subscribe at **youtube.com/royalsociety**

What do you think?

Shape our future events by giving your feedback. Complete the feedback survey in the reception area or scan the QR code to complete it online.

THE ROYAL SOCIETY · TRIVEDI
SCIENCE BOOK PRIZE 2026

Discover the 2026 shortlist

Announced on 30 June, these are the science books set to spark conversation and inspire curiosity. Scan the QR code to explore this year's shortlist and order your copies today.

Acknowledgements

The Summer Science Exhibition 2026 exhibits have been created and produced by the following institutions and partnerships.

The art of resilience for successful ageing
Brighton and Sussex Medical School, University of Sussex, University of Brighton and Birkbeck College, University of London.

Euclid, the dark universe detective
University of Edinburgh, University of Sussex, The Open University.

From our lab to your home: 25 years of formulation engineering
University of Birmingham.

Hands-on, hands-off and hand-in-hand: the future of robotic assembly
University of Oxford.

Immortalising natural history in 3D
University of Southampton, University College London.

Laser-focussed on science for radiotherapy
The LhARA collaboration is made up of many partners drawn from across the UK, Europe and the Americas. For a full list of the members of the LhARA collaboration visit lhara.org

Microbe zoo
Centre for Microbial Interactions, SAW Trust, Norwich Research Park.

Nanomaterials: a giant leap for healthcare
University College London.

Revealing the cosmos with the Simons Observatory
University of Oxford, University of Cambridge, Imperial College London, University of Sussex, University of Manchester, Cardiff University.

Shifting sands: when solids flow and liquids jam
Newcastle University, University of Manchester, Edinburgh Napier University, University of Strathclyde, Mercury Lab.

Supercomputing: the good, the bad and the beautiful
EPCC, University of Edinburgh.

Thunderbolts and lightning
Cardiff University.

Universe makers
Durham University, University of Sussex, Imperial College London, University of Portsmouth.

For more information visit **royalsociety.org/summer**

The Royal Society Summer Science Exhibition is supported by The Department for Science, Innovation and Technology (DSIT).

The Royal Society

The Royal Society is a self-governing Fellowship of many of the world's most distinguished scientists drawn from all areas of science, engineering, and medicine. The Society's fundamental purpose, reflected in its founding Charters of the 1660s, is to recognise, promote, and support excellence in science and to encourage the development and use of science for the benefit of humanity.

The Society's strategic priorities are:

- The Fellowship, Foreign Membership and beyond
- Influencing
- Research system and culture
- Science and society
- Corporate and governance

For further information
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Founded in 1660, the Royal Society is the independent scientific academy of the UK, dedicated to promoting excellence in science.

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