



The Royal Institution  
Science Lives Here



# Our impact

2022-23

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Thank you



# Welcome

In the 12 months from October 2022 to September 2023, over three million people throughout the UK – adults, children, and families together – discovered science for the first time, or deepened their engagement with it, through talks, workshops, shows and programmes from the Royal Institution.

Those who enjoyed the opportunities we created to explore directly with scientists here in the UK, were joined by millions more globally who accessed their science through our enduringly popular YouTube channel.

In a year in which we launched our new five-year strategy for growth, we are pleased to be reporting on the successful delivery of more Ri activities that increased our reach and welcomed new and more diverse audiences to science.

Just under three million people enjoyed the 2022 CHRISTMAS LECTURES with Dame Sue Black, with Lecture One being the most-watched factual programme of the entire year on BBC Four. We supported the science education of just under 80,000 students – the majority of them from schools in the most disadvantaged parts of the UK – through our Science in Schools Programme. Over 100,000 people worldwide subscribed to our YouTube channel for the first time, taking total subscribers to 1.4 million by the end of the year. And over 2200 visitors – over half of them new to the Ri – enjoyed our special Milky Way VR Experience during summer, in the space of just four weeks.

We have also been pleased to see the ground-breaking research undertaken at the Ri by UCL continue to make new contributions to nano-science and its application in medicine; while the London Institute for Mathematical Sciences has a wide-ranging programme including a successful fellowship scheme for Russian and Ukrainian mathematicians and physicists.

We are grateful to our wonderful staff at the Ri for their dedication and tireless effort in making this success possible; and to our Members, Patrons, volunteers and many, many supporters who gave their time, expertise or financial support so freely again this year, as they have done in the past.

Our new strategy is deliberately scalable – the more support we can secure, the greater our impact can be – and partnerships sit at its heart. We know we can achieve more when we work with others. So as we look forward to further growth in the year ahead, we also look forward to your continued support. The Ri is a home for science and everyone is welcome.



**Sir Richard Catlow**  
Chair  
The Royal Institution



**Katherine Mathieson**  
Director  
The Royal Institution

# Our vision, belief and mission

## Our vision

Science is for everyone.

## Our belief

Science transforms lives and underpins the modern world – from health to the latest technology, the environment, and the furthest reaches of our universe. Science is part of culture, but not everyone has the same opportunity to engage. The Ri believes there should be equitable access to science, and that people's desire to engage with science and scientists should be nourished.

## Our mission

The Ri is a charity that brings the public and scientists together to share their interest and passion for science. We empower people to explore and get involved. **We are a home for science and everyone is welcome.**

Jemma from our LYSC Team delivering exciting exposure to science that differs from school provision, at the annual Big Bang Fair.

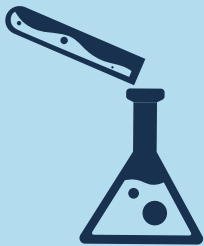


# Our values



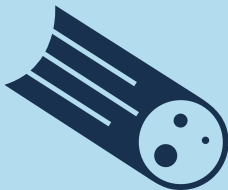
## Welcoming

We are open, friendly and accessible. We are inclusive and diverse, sharing science with people from all backgrounds, all places and all levels of knowledge and interest: from leading scientists to anyone who is curious about the world around them.



## Experimental

For 200 years we have innovated and played with how science is shared with the public, presenting it in thrilling and invigorating ways. By being experimental in how we work and engage we build deep and sustained connections to science.



## Impactful

We are focused on making a positive impact to people's lives. We listen to our audiences. We evaluate what we achieve and how we achieve it. We demonstrate success.



## Collaborative

We co-operate and co-create with others – within the Ri, with the public, with organisations across the scientific community and beyond.



## Open

We don't believe the story of science is ours alone, or that we have all the knowledge and ideas. We are a platform for discussion and debate, recognising that there may be as many questions as answers.



# The impact we made

We are focused on making a positive impact in people's lives, and throughout the year we have extended our reach across London and throughout the UK, supported scientists to connect directly with the public, shared science in engaging ways, and made a demonstrable difference to students' experience of science, particularly at schools in disadvantaged areas.

We have renewed our commitment to our environmental responsibilities, making the Ri more sustainable, while supporting and championing our talented staff and volunteers and our collective values.

Our audiences are becoming more diverse, feel they know more about science, and feel more confident in talking about science, seeing it as relevant to their lives. The public and scientists valued the experiences they shared at the Ri, and we have championed science education in school and in the home.

At the same time we know we do not have all of the answers and we are not too proud to learn. There are others who are engaging with audiences we find harder to reach, so we seek to add value rather than compete. And we continue to learn from our audiences and our science communication peers, listening and evaluating in order to build and demonstrate our success.



# Our impact

‘It was good to see how many of the visiting speakers were women which can only encourage women in science – and more for the better!’

Ri Member

## Ri YouTube

# 10m+

Views for our YouTube short ‘How to fool ChatGPT’

‘The sessions have inspired me to experiment with these topics in a secondary setting due to their thought provoking and interactive nature.’

Teacher, Ri Masterclasses

## Public programme

# 84%

Proportion of Theatre talk attendees who said they had learned something new

‘This is a once-in-a-lifetime opportunity for our children. It is a great way to inspire them to potentially have a career in science.’

Teacher, LYSC

## Ri Masterclasses

# 80%

Confidence level in computer science among female students after an Ri Masterclass, versus 56% before it

‘Amazing experience for our son and his friends. It was wonderful to hear them so excited about maths.’

Parent, Ri Masterclasses

## CHRISTMAS LECTURES

# 2.9m

Viewers of the 2022 CHRISTMAS LECTURES with Dame Sue Black

‘I don’t want to ever leave, I love this place!’

Student, Ri Holiday Workshops

## Science in schools

# 79k

Number of students engaged through Science in Schools

‘My son came out buzzing as he learnt more about chemical reactions. He has Asperger, chemistry is his passion, and experimenting live is so much more exciting than watching it on the Internet.’

Parent, LYSC

## Science in Schools

# 94%

Proportion of schools benefiting from an Ri grant that were in the 40% most deprived areas of the UK

## Ri Membership

# 27%

Growth in Ri Membership versus the previous year, as we continue to build back strongly

‘I have no doubt that our young people learned an awful lot last night and will remember taking part in this for a long time to come.’

Teacher, Ri CHRISTMAS LECTURES

‘It’s this type of programme that encourages youngsters into science careers where critical thinking and approach really matters.’

Parent, Ri CHRISTMAS LECTURES

## Ri YouTube

# 1.4m

Subscribers in total, with 107k new people joining this year

## L’Oréal Young Scientist Centre

# 100%

Proportion of teachers agreeing that our L’Oréal Young Scientist Centre offers students a new and positive experience

‘What a fantastic way to teach children science.’

Parent, LYSC

## Public programme

# 30k

Adults and children enjoying Ri Theatre and online talks

‘The impact on both the Year 5 students and the sixth formers has been profound.’

Teacher, Ri Masterclasses



‘Our train journey home was full of excited chatter about the day, reflecting every experience and sharing those experiences with anyone that would listen.’

Teacher, LYSC

## CHRISTMAS LECTURES

# 97%

Proportion of 11-17 year olds who said their understanding of forensics had increased due to the CHRISTMAS LECTURES

‘I loved the audience participation and it was great to see the young people being so engaged.’

Ri Trust supporter, Ri CHRISTMAS LECTURES

## Schools engagement

# 1200

Number of Ri debate kits made available for free to UK schools

‘I’d like to second @STEMillie\_’s big shout out to the @Ri\_Science team. Biggest bunch of can-do people you could ever hope to meet and all passionate about #SciComm.’

Prof Turi King

## GLA grant funding

# 4.5m

Grant secured from the GLA to environmentally retrofit the Ri

‘I’ve learnt so much about myself too. I’m a lot more confident in myself and working in groups/asking questions.’

Student, Ri Masterclasses

## Ri YouTube

# 21.8m

Ri YouTube video views during the year

‘Thank you so much Tickets For Good, we had such a fun time at the Royal Institution yesterday. Brilliant.’

Ri Theatre attendee

## Science in schools

# 3000

Number of teachers receiving CPD training, at over 250 schools

# Bringing scientists and the public together

When the Ri's founders set about creating the world's leading scientific research establishment in 1799, they built our wonderful Theatre first. Public engagement with science has always been the Ri's primary purpose.

Today, as an independent charity, we are renowned as a place that is synonymous with some of the greatest scientific discoveries, and as the birthplace of theatrical science demonstrations. We are a leading provider of science visits to schools in the UK. We offer unprecedented access to science talks worldwide with a YouTube community of more than 1.4m and growing.

Most of all, we create spaces for scientists and the public to come together to share their passion, curiosity and joy about science. We empower people to explore and get involved.

Wherever the Ri is – at our historic home in Albemarle Street, in classrooms throughout the UK, or online in homes around the world – we are a home for science and everyone is welcome.





# Launching a new period of growth

Bringing scientists and the public together sits at the heart of our [\*\*five-year strategy for growth\*\*](#), launched in May 2023.

Our vision is simple: Science is for everyone. And our strategy to realise that vision is deliberately scalable – the more income our charity can secure, the greater our impact can be.

Because we are rightly ambitious in our intent to make the Ri more accessible, to reach new and more diverse audiences, to make a demonstrable difference to students' experience of science, and to see everyone more confident about science and its relevance to their lives.





# Theatrical science for adults and families

We welcomed nearly 30,000 adults and children to our **public science talks** during the year, live in our historic Theatre and online.

With today's leading researchers doing what Faraday, Davy and Tesla did: sharing their science with the public.

Of those who enjoyed a talk, nearly a third were new to the Ri, with 89% saying they'd be back. At the same time, 84% of our audiences reported enjoying the event they attended and that they had learned something new.



## Partner science

We know that we can engage more people and have greater social impact, when we work with those who share our objectives and our values. So we were pleased to grow the number and breadth of our content partnerships during the year, as a core foundation of our public events calendar.

Our thanks go to The Faraday Institution, The Alan Turing Institute, The National Physical Laboratory, Digital Science and the UK Atomic Energy Authority.

Throughout 2022-23 they brought their engaging, fascinating, ground-breaking science to the Ri. And with our public engagement expertise, we brought the audience to their science.



# Enabling more people to engage with Science

Many who love science, or those who are just curious about the world around them, engage with the Ri for the first time every day. Through our popular YouTube channel, to which we welcomed 107,000 new subscribers during the year. Or through our Science in Schools visits, where we reached 79,000 students, or through our curation of stimulating opportunities, such as our summer Milky Way VR experience, where half of the 2200 people who came were visiting the Ri for the first time.

Through our new strategy we are committed to do more. Growing our audiences and reaching new and more diverse people are central strategic aims. We welcome those who are able to come, to our home in Albemarle Street; and for those who are unable to come, we take our science to the places where they are.

In achieving these aims, we are making the Ri more open, more accessible and more welcoming. And when we make the Ri more accessible, we make science more accessible.





## Driving online growth

Our digital content grew during the year, bringing a corresponding growth in the outcomes we were seeking: sharing Ri science around the world, welcoming new audiences to science, and deepening engagement.

We welcomed 107,000 new subscribers to our [YouTube channel](#), taking the total to 1.4m as at 30 September. Our videos were viewed just under 22 million times, with an overall watch time of 4.7m hours.

We shared science in innovative and exciting ways on our social media channels, driving engagement rates on X and Facebook in excess of platform benchmarks. And on TikTok we saw increased engagement from a younger audience, particularly women in the 18-24 year old age bracket.



## Curating content

As algorithms led a resurgence of short-form content in 2023, our agile Digital Team saw opportunity in producing YouTube shorts, including ‘How to fool ChatGPT’ with over 10 million views and ‘How can maths help us make better predictions?’ with over 8 million.

Analysis confirms that our engaging short-form content motivates viewers to subscribe and engage more deeply through longer-form videos.

TikTok chose to partner with us to develop science educational content on the platform through their #sciencetok initiative. A day-long science creation workshop to bring 45 science engagement organisations together with TikTok creators, saw participants rate the experience 9 or 10/10, with 100% being more likely to partner with content creators as a result. At the same time our partnership with TikToker Big Manny brought his unique style of engagement in recreating Davy’s Potassium volcano, in a short receiving 3.5 million views and over 130,000 likes.



# CHRISTMAS LECTURES

## The secrets of forensic science

We were delighted to invite Dame Sue Black, one of the world's leading forensic investigators, to take centre stage in our iconic Theatre for our 2022 CHRISTMAS LECTURES. A total of 2.9m adults and children engaged with the national television broadcast and on iPlayer during the first 30 days; while our first Lecture was BBC Four's most-watched factual programme of the whole year.

Viewing figures overall represented the second highest total in the past decade, consolidating the reach driven by the highest, Jonathan Van-Tam's hugely topical Covid series in 2021.

Feedback tells us that 97% of our young Theatre audience felt their understanding of forensics had increased, while 72% said their understanding of science's place in our lives had also increased. We we're pleased to make Dame Sue's Lectures available around the world for free via the Ri website, and thanks must go to our 2022 Lectures supporters, UKRI, Agilent Technologies and Horiba.

Accessible science for a young audience. 2022 Christmas Lecturer Dame Sue Black, sharing centre stage with Isla from the Ri Demo Team.





# Everyone is welcome at the Ri

Through our new strategy, equity, diversity, inclusion and accessibility sit at the heart of the Ri. Each is vital to our success; and more than that, we believe that each makes science better. As such, our commitment is to be an organisation that treats all people, regardless of their background, with dignity and respect; an organisation that challenges discrimination and prejudice.

During the year we revised [our EDIA Policy](#) and re-stated our commitment; we ran more events celebrating the contribution to science of under-represented communities; we were delighted to host Ada Lovelace Day when it looked like the live event might not go ahead; and we broadened our support for pupils at schools in deprived parts of the UK.

Like many organisations, we recognise we are on a journey to continually improve our EDIA outcomes. We will seek out feedback, we will listen to others, and we won't be too proud to learn. As a home for science, everyone is welcome at the Ri.



# Sharing science in engaging ways

Netflix, TikTok, National Trust. In a world of content and activities on demand, ‘twenty-four-seven’, we need to ensure our Ri-brand of science cuts-through.

So we are committed to sharing science in engaging ways and supporting teaching and practical skills for STEM, in ways that align with our reputation as a home for science communication and demonstrations.

Championing the power of the science demonstration, experimenting with new formats and exploring cross-cultural non-science collaborations were just some of the ways in which we created accessible ‘gateway’ content during the year. We increased use of demonstrations as an integral part of our public Theatre talks, brought the latest VR cinema experience to the Ri for the first time, and partnered with cooks and comedians.

Gateway content is accessible content; and at the Ri we worked hard to put it to good use throughout the year, reaching new audiences, deepening engagement and growing our impact.



# Making complex science accessible

At the Ri we have a well-deserved reputation as the home of the scientific demonstration. That Humphry Davy's nineteenth century Lectures were so popular – generating such chaotic traffic in Albemarle Street that the authorities were moved to make it the UK's first one-way street – was due to his scientific research, his skill as an orator, and his demonstrations. Championing engagement through demonstrations is nothing less than a part of our DNA.

Demos add a wow factor. More importantly, they make complex science more accessible for our audiences. So we were pleased during the year to support more scientists taking part in our activities, to engage more effectively with the public by increasing the use of visual science as a core part of our programme.

Our in-house Demo Team found increasingly creative ways to visualise important scientific concepts from slow motion gravitational wave models, to winning The BIG 'Best Demo' competition with their plasma toroid equipment.

Another award-winning demo from the Ri Demo Team: The plasma toroid in action.





## Beyond the Milky Way

Over the summer, we offered an enhanced opportunity for public audiences to engage with science at the Ri through a special virtual reality experience with narration by Brian Cox. It was a first move into VR for the Ri and a clear step in sharing science in exciting new ways.

Using the latest immersive experience VR technology, Ri audiences were transported to the radio quiet Australian Outback to enjoy an immersive tour of the new SKA observatory. When complete the observatory – one of the most significant international scientific endeavours in history – will offer opportunity to see further back in time than ever before, increasing understanding of how our Universe came to be, and the best-ever chance of discovering if there is other life out there.

Of the 2200 intrepid travellers who enjoyed the journey, over half were visiting for the first time; meeting a core objective to attract new science-curious audiences to the Ri.

# Curating cross-cultural content

Throughout the year we continued to explore cross-cultural, non-science collaborations, bringing new audiences to the Ri – and to science – through the creation of ‘gateway’ events exploring relatable topics.

We partnered with comedian Robin Ince and the team at Cosmic Shambles with their new podcast series being recorded live at the Ri, and hosted the world premier of their first-ever feature length documentary movie.

We welcomed BBC radio’s ‘Kitchen cabinet’ to record an episode with popular host Jay Rayner, before returning to the universal popularity of food and drink for three sell-out tasting events of our own: the science of cheese, beer and Champagne. And along the way we were pleased to host the sold-out ‘Muslim tech festival’ in our Theatre, while covering everything from tackling misinformation, to the science of emotion, to engineering with origami.

Just as teachers tell us our debate kits engage students with little or no normal interest in science, our gateway events play a similar role in attracting those who may not think science is ‘for them’, but who are nevertheless curious about the world around them.

Cosmic Shambles hosted the premiere of their documentary ‘Rapid Motion Through Space’ here at the Ri.





# Building on our Heritage

With our founding principles to ‘apply science to the common purposes of life’ being as relevant today as they were when we were founded in 1799, our rich heritage provides the foundation for our charitable mission to bring the public and scientists together. We are proud of our heritage of scientific discovery and pioneering public engagement.

And by preserving our collection for future study and engagement, and interpreting it to enable wider and deeper access, we are building on that heritage.

Our free museum is open to the public every weekday, making the history of science accessible to all. Our exploration of the latest leading-edge science in our Theatre is enriched by interpretation of iconic objects from our past; while support for the next generation as they complete their doctoral studies contributes to shaping equitable and sustainable futures. We are delighted to welcome leading historians and scientific researchers to examine our internationally significant collection, and to tell the story of less well-known figures of the past.

In taking our unique heritage to new audiences – scientists, academics, adults, children and families – we are finding fresh ways to ensure everyone can enjoy and benefit from science.







# Preserving and interpreting our collection

We are proud and careful guardians of **our rich scientific heritage**, preserving our internationally significant collection on behalf of the nation. Each object communicates the Ri's continuous traditions of discovery and engagement.

During the year we hosted 19 Reader visits to our Archives, provided objects and expertise at over 30 public events and continued public tours of our building and Collection. We were delighted to accept a space-flown artefact from NASA in recognition of the Ri's contribution to public communication around space exploration.

We also continued work to digitise our collection of Tyndall correspondence and to care for our unique premises. Because through preservation and interpretation our scientific heritage becomes everyone's scientific heritage, for future study and enjoyment, enabling wider and deeper engagement with scientific advance.



## Learning from the past

Our ambitious project in partnership with Lancaster University, to transcribe 75 of Humphry Davy's 'notoriously difficult to read' notebooks through a mass public participation project, culminated in a temporary exhibition revealing some of Davy's innermost thoughts and providing valuable new insights into his scientific discoveries. With the 200-year-old secrets revealed for the first time to a public audience at the Ri during the exhibition's two-month installation in our free museum, we were delighted to see it on the road, travelling first to Northumberland and then to Cumbria.

And with generous support from the Freer Trust, three new Freer Fellowships were awarded, supporting final year PhD researchers to complete their studies at the Ri. Each of the Fellowships – to UCL's Vanessa da Silva Baptista, Université Paris-Cité's Sarah Hijams and Cambridge University's Gianamar Giovannetti Singh – were awarded on the basis of candidates' ability to communicate the significance and potential of their research to provide insights into present day challenges, in a compelling way to engage a public audience.

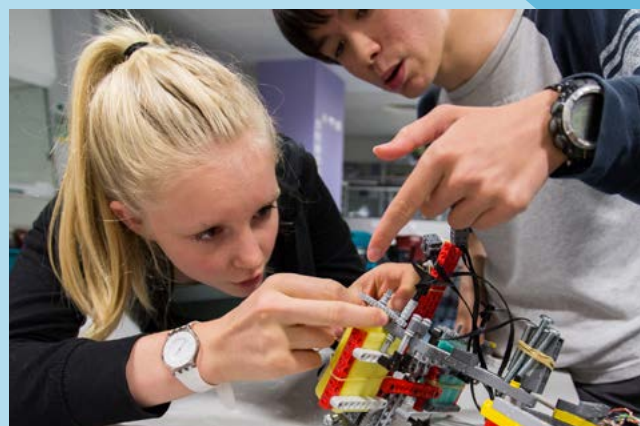
# Driving deeper engagement with science and the Ri

Alongside reaching more diverse audiences and bringing new people to science, deepening our audiences' engagement with science, and with the Ri, is a core strategic aim. We believe that repeat engagement with science is more impactful than a single interaction, however stimulating.

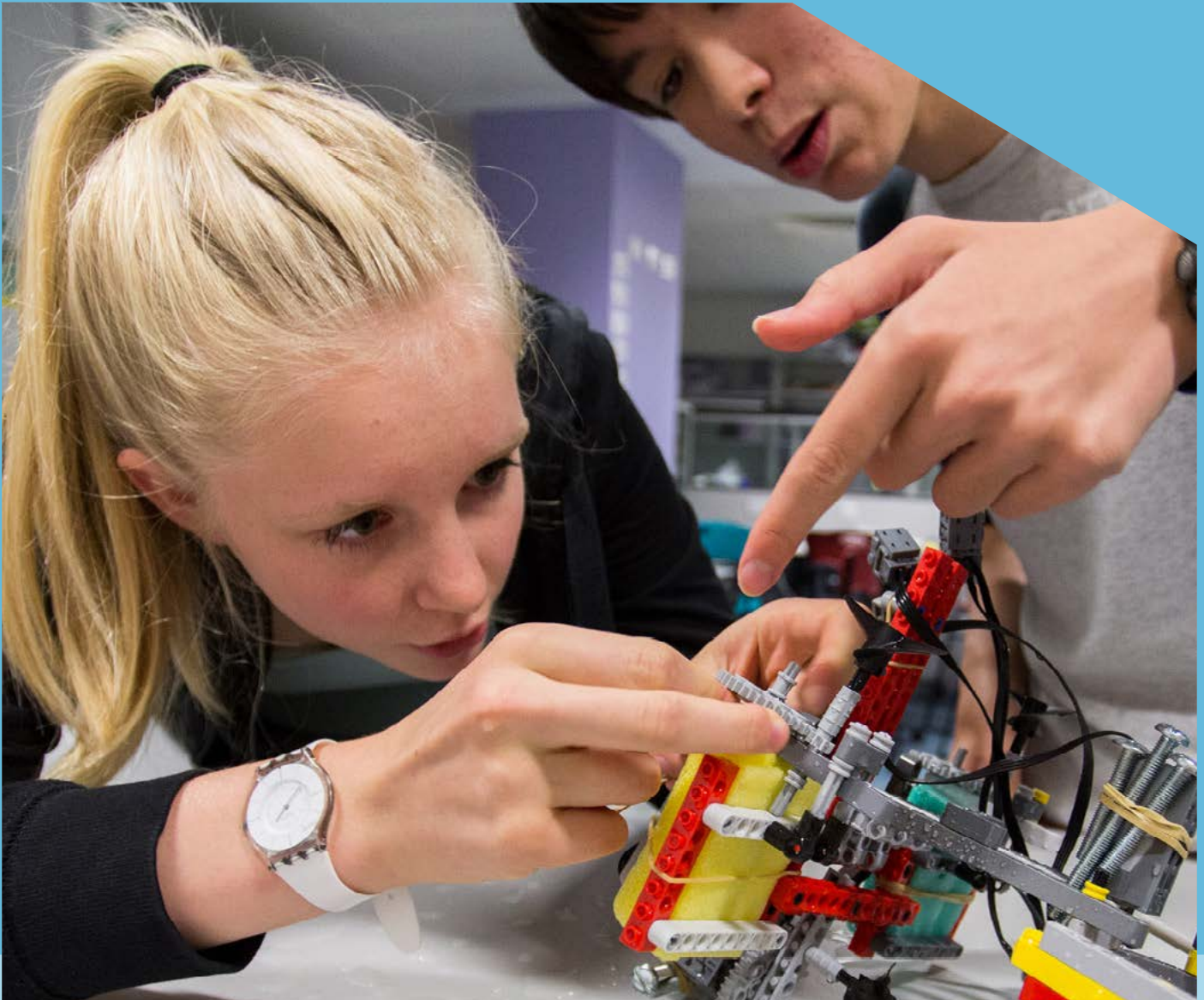
So our activities are designed to appeal to people at every stage of their personal interaction with science, from entry level to expert.

Our Science in Schools programme is designed to ignite an interest in science, while our Masterclasses enable students to explore more deeply. Our Theatre events include gateway programming, while our regular short courses bring expert tuition to those who want to focus on a given topic. Our audiences can move from being newsletter subscribers and event attendees, to Ri Members, to Ri Patrons, deepening their relationship with science at each stage.

By listening to our audiences and involving them in our programming, we are able to offer opportunities to follow a clear engagement journey. And whether an individual continues to find their science at the Ri, or elsewhere, it is the depth of their relationship with science we are seeking.







## Supporting in-depth learning

With the support of Causeway Technologies, The Clothworkers' Foundation, The Company of Actuaries and Google, we delivered 129 series of our long-running and enduringly popular **Ri Masterclasses** in mathematics and computer science. In all we reached over 5,300 students through our free sessions, each nominated by their teachers as being particularly likely to benefit from an in-depth exploration of science while being unable to access similar paid-for opportunities.

94% of students reported enjoying the Ri Masterclass experience, while we were also pleased to see more positive attitudes towards computing careers, particularly among female students, with confidence levels increasing from 2.8 out of 5 before the series to 4 out of 5 after it.

We also continued our innovative model of supporting Year 11 and 12 students to deliver Masterclasses to primary-aged students, bringing benefits to both age groups. This year we held over 30 training courses for nearly 450 sixth-form students across the UK.



## Growing the CHRISTMAS LECTURES impact

We partnered once again with the team at 'I'm a Scientist' to drive deeper engagement in the 2022 CHRISTMAS LECTURES topic. Throughout January over 600 students across the UK enjoyed the opportunity to ask their many and varied questions direct to scientists working in the field of forensic science, through our annual online Q&A Zone.

And from March, 1200 Ri debate kits were made available for schools to use in their lessons and activities, posing the question 'Is DNA evidence reliable enough?' Teacher evaluation shows that our debate kits – now in their 7th year – offer young people a valuable opportunity to develop confidence in forming and debating opinions and, through use in non-science lessons, inspire students who wouldn't normally engage in scientific topics.

We look forward to further developing engagement with the CHRISTMAS LECTURES, with the support of Title Partner CGI beginning with the 2023 Lectures.



# Our community of Ri Members

We completed an in-depth review of **Ri Membership** during the year, providing valuable insight into ways in which we might widen and deepen engagement among our loyal supporters.

Our audiences told us what they wanted and we acted accordingly, with feedback leading directly to the introduction of a Family Membership for the first time at the Ri. The cost saving versus individual memberships and the flexibility to define your own 'family' of up to two adults and four children, have made Ri Family Membership a popular choice since its launch in September.

We also began a new model of Membership which we will seek to develop in the year ahead. Through the model, leading driver of UK innovation and growth, Advanced Research Clusters, supported the ability to offer Ri Memberships for free to their audiences across multiple locations; an important CSR contribution for ARC, a valuable benefit for their staff, clients and stakeholders, and a new source of significant financial support for the Ri as a charity.

By the end of September, we had 4,205 Ri Members – an increase of 27% compared with the previous year – with a retention rate among adult members of over 74%.

Ri Members and Patrons explore science more deeply and make a valuable contribution to our charity.



# Inspiring students to have a future with science

Young people today are the scientists, mathematicians and engineers of tomorrow; and finding the solution to the world's future challenges rests in their hands. So it is vital that we inspire students to see a future with science and that is why it is a central aim of our new strategy.

But by students, at the Ri we mean anyone and everyone who wants to find out more about science. Young people certainly; offering exciting exposure to science that differs from school provision, or identifying gaps in education provision that might be filled by Ri activities. And adults also; maybe the office worker who studied science at university and now has time to return, or the parent with grown up children and a newfound opportunity to explore something new.

The Ri is a home for science and everyone is welcome. There are no knowledge-based minimum entry requirements to engage with science in our Theatre, in our schools, or online.

So, throughout the year, we have showcased scientists and communicators from wide and diverse backgrounds because representation matters. We have created 'gateway' activities, with relatable content, highlighting the relevance of science to our lives. And we have provided inclusive experiences of science, including insights into a wide range of careers and career journeys in an age-appropriate way.







## Scientists for a day

With L'Oréal continuing their long-standing support for [our L'Oréal Young Scientist Centre](#), we delivered hands-on explorative laboratory sessions to over 4,000 school students and began work on a brand new workshop to support teaching around sustainability and climate change mitigation.

From forensic science, to crash-testing, to DNA, students became a scientist for the day, testing their own ideas by designing creative experiments. And just as in the best research laboratories, each had access to advanced technology and experiments outside the remit of the normal school curriculum.

Feedback remained positive with 100% of teachers agreeing that Ri lab sessions offer students a new and positive experience, build on their existing knowledge of science and are effective at maintaining their engagement.



# Inspiring students and teachers alike

Throughout the year our inspirational [Science in Schools](#) presenters engaged just under 80,000 students and provided CPD training to 3,000 teachers, at nearly 200 schools across the UK. Of the students we inspired, 75% were at schools in the most deprived areas of the UK.

And with these schools receiving grants from the Ri to fund their Science in Schools experience in full, we were able to reach many of the under-served groups identified by teachers as being in most need of STEM support.

Around 80% of teachers reported that students' attitudes towards STEM topics had become more positive, with knowledge and understanding increasing as a result. Three-quarters of teachers said our training had improved their skills, confidence and creativity in delivering science demos for their students. We are grateful for the kind support of Bain Children's Fund Europe.

Also during the year we trained our presenters in how to adapt demos for SEND settings and partnered with the Ukrainian School in London to translate key words in Ukrainian. And with generous support from AstraZeneca, we developed a new show incorporating content from the 2021 CHRISTMAS LECTURES about Covid-19, while increasing our reach in London thanks to support from Kusuma Trust UK. In the year ahead we look forward to delivering new support for schools, around the crucial subject of sustainability, with generous support from Google.

Explosive hand crank generator demonstration from Sophie Ward, one of our Science in Schools presenters.



# Providing career inspiration

Scientists don't all wear white coats; they don't all work in labs; and sometimes young people might not consider a career choice to be 'science' at all. But it often is! So the 'For your inspiration' events we run at the Ri every year, are an ideal opportunity for students aged 13+ to get to grips with what working in a particular field is *really* all about.

In 2022-23 we partnered with the Genetics Society to explore the wide-ranging applications of a career researching the building blocks of life: DNA. And with the support of the University of Portsmouth we gained insights into how creating, distributing and using energy is one of the fundamental aspects of how societies function.

At each interactive event, our young audience heard direct from scientists in each field – how their jobs are helping to improve our world and how they became scientists themselves – before enjoying a hands-on taste of working life, through real-world activities run by researchers and companies from across the UK.

Talking to experts and specialists, and others just starting out in each field who are not much older than themselves, is an invaluable experience for young people who are making education choices that may stay with them for life.

Young people  
getting hands-on at  
our Genetics Society  
FYI event.



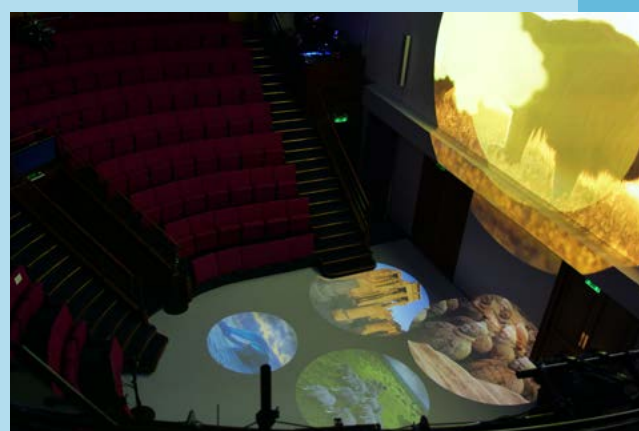
# Shaping a thriving and sustainable Ri

As an independent charity we are reliant on the income we are able to raise ourselves, to increase our support for schools in deprived areas of the UK, to keep our Masterclasses free for students who benefit most from them, and to care for and preserve our heritage collection for everyone to enjoy. And as our five-year strategy is deliberately scalable, the more support we can secure, the greater our impact can be.

So creating a thriving and sustainable Ri is vital and perennial objective, and we are grateful to all those who have supported the Ri throughout the year – our Members and Patrons, our corporate partners, and our commercial clients to name just a few – who have given so freely of their time, expertise and financial support.

Yet sustainability extends beyond enhancing our financial stability; to maximising our operational effectiveness, creating an empowering, inclusive, and diverse workplace, and reducing our environmental impact. All are core objectives.

There can be no support for education, no opportunity for public audiences to meet directly with scientists in our Theatre, nor public access to a rich and free museum without a thriving and sustainable Ri.







## Taking Ri science around the world

Science is a collaborative, international endeavour and that extends to public engagement as much as it does to scientific advance. Throughout 2022/23 we increased our international activities versus the previous year.

Our in-house Demo Team created a bespoke livestream for pupils and staff at the Kellett International School in Hong Kong. Also in Hong Kong we provided live and online Ri science for thousands at the annual Croucher Festival, a long-standing international partnership.

In Japan we took the 2021 CHRISTMAS LECTURES, 'Going viral', to a Theatre and online audience at The Yomiuri Shimbun, another partner of many years; while we also supported science education in Korea and Brazil.

# Commercial support for our charity

When an organisation books space at the Ri, **our unique venue** plays host to their unique event. But more than that, their booking contributes much-needed income to support delivery of our charitable activities.

During the year, we saw venue hire enquiries rise again, as the event industry continued its post-pandemic growth. Of the 222 individual events we hosted, half were on behalf of science focused organisations, from the UK Space Agency, to the Francis Crick Institute, to the Association of British Science Writers. And we welcomed more organisations whose objectives and values align with the Ri – educators, environmental groups and not-for-profits such as Cancer Research UK and the Royal National Institute for the Blind.

At the same time, we continued to support the annual day-long visit from the Girls Day School Trust and reached agreement to welcome their students for a further three years. We signed publishing contracts with Dorling Kindersley and Scala Publishing, and secured new contracts with KAMPS Education.

In all, our small commercial team significantly exceeded income targets, contributing to a thriving and sustainable Ri.

Preparing for the  
National Geographic  
Explorers Festival  
London in the Ri  
Theatre





## Caring for the Ri

Maintaining a Georgian building as a place of public engagement, achieving the right balance of splendour, heritage and modern-day practicality, is a constant endeavour.

Throughout the year we invested in our rolling programme of planned maintenance and we continued to reduce our environmental impact through renewable energies, energy-saving initiatives and behaviour change among our staff and visitors alike. We completed an accessibility audit as one of the steps we are taking to make the Ri more welcoming, alongside continuously enhancing the visitor experience.

And in December 2022, we welcomed the awarding of a £4.5 million grant from the GLA to environmentally retrofit our historic home. When this ambitious project is complete, the Ri will serve as an environmental exemplar – to London, the UK and the world – of what can be achieved with the older building stock contributing such a significant proportion of the built environment's CO<sub>2</sub> emissions.



# Working with others to increase impact

Recognising that we can have a greater impact when we work with others, we co-operate and co-create with aligned organisations to support science engagement.

So we were pleased to see our impact throughout the UK enhanced by our partnerships – through our dedicated Masterclasses organisers, through our CHRISTMAS LECTURES livestream partners, through individual schools, and through the support of the many, many STEM organisations who share the opportunities to engage with science we create, with their audiences.

We once again partnered with the Association of British Science Writers in recognising the outstanding skills of young people at state maintained schools throughout the UK, via our annual Young Science Writer of the Year Award.

And we remained very proud to continue hosting some of London's pre-eminent science and research organisations in office and lab space at the Ri: 'Undaunted', our climate change partnership with Imperial, supporting clean-tech start-ups, UCL's nanomaterials and magnetic materials research team, and the London Institute for Mathematical Sciences. Together, we are able to help showcase their scientists, and their work, to a public audience, while they continue new chapters in the important heritage of scientific research at the Ri.

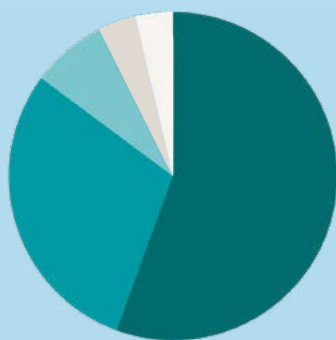
BBC Science correspondent Victoria Gill pictured at the Ri with 2023 Young Science Writer of the Year Michael Forson



# Our finances

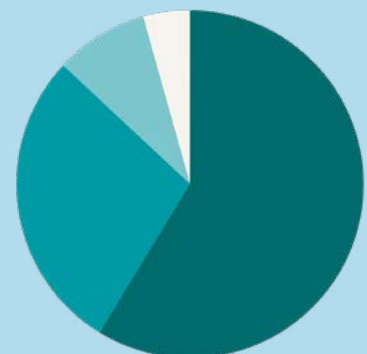
We are pleased to report that during the 2022-23 financial year, we took further positive steps towards pre-pandemic income levels, in particular through the contribution made by our private venue hire clients. Also during the year, we received a further instalment of a significant legacy donation first reported in 2020/21, secured Charity Commission approval to re-purpose historic endowment funds for modern-day use, and received the first instalment from the GLA of a £4.53 million grant to environmentally refurbish the Ri.

Our total income (unrestricted and restricted) in the 2022-23 financial year was £5.9m. We generated £3.4m of trading and investment income, and £2.5m through membership, events, and fundraising. We incurred an operating deficit, before investment gains, of £0.8m, the same level of deficit that we had in 2021-22.



**Left: How we spend our money.**  
**Total expenditure 2022-23: £6.7m**  
 ● Education programme: £3.4m  
 ● Trading activities: £2.1m  
 ● Raising funds: £0.6m  
 ● CHRISTMAS LECTURES: £0.3m  
 ● Heritage: £0.3m

**Right: How we fund our work.**  
**Total income 2021-22: £5.9m**  
 ● Trading: £3.4m  
 ● Grants and events: £1.9m  
 ● Donations and legacies: £0.4m  
 ● Membership and subscriptions: £0.2m



# Our governance

The Royal Institution was founded in 1799 and received its Royal Charter on 13 January 1800. We are an independent Royal Charter charity, governed by our Byelaws and governing documents.

Our Trustees number 13 in total, nine elected by the membership of the Ri and four appointed by the Board. The Trustees ensure the Ri carries out its charitable purposes for public benefit and complies with its governing documents.

The Board meets a minimum of four times per year and is supported by four standing Committees: the Audit and Risk, Finance, Nominations, and Remuneration Committees.

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## Royal Patron –

The former Prince of Wales was our Royal Patron

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## President –

HRH The Duke of Kent

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## Honorary Vice President –

Sir John Ritblat

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## Trustees –

Sir Richard Catlow (Chair)  
 Prof Alison Woollard (Vice Chair)  
 Dr Sophie Forgan  
 Simon Godwin  
 Kate Hamilton  
 Dr Suze Kundu  
 Renato Lulia-Jacob  
 Rt Hon, Lady Estelle Morris, Baroness of Yardley  
 Vincent Nobel  
 Chris Potter  
 Prof Angela Seddon  
 Prof Jack Stilgoe  
 Harriet Wallace





# Thank you

We would like to extend a huge thank you to all those who generously support the charitable work of the Royal Institution. Our Trustees, Patrons, Members, donors, corporate supporters, volunteers and visitors give us their time and expertise so freely, make an invaluable financial contribution, or both.

As an independent charity we rely on your support to encourage people of all ages to begin their lifelong journey with science. We look forward to continuing our important mission with you in the year ahead.

## Major supporters –

Arts Council England via the Culture Recovery Fund	The Clothworkers' Foundation
Bain Capital Children's Fund Europe	Google
Causeway Technologies	Kusuma Trust UK
CGI	L'Oréal UK & Ireland
Company of Actuaries Charitable Trust	

## Director's Circle Patrons –

Luca and Leila Bassi	Simon Godwin
Cristóbal Conde	W & M Seddon

## Faraday Circle Patrons –

James del Favero	Sir Desmond Pitcher
The Faraday Foundation	Hank Roberts

## Diffusion Circle Patrons –

Nicholas and Tobe Aleksander	George Maher
Stephen Corben	Duncan and Lynn McInnes
Ian Cragg-Hine	Sriram Nadathur
The de Laszlo Foundation	Martin Pidd
Paul Drake	Tim, Stacy and Sebastian Thornton

## Magnetic Circle Patrons –

Azad Ayub	Chris Lowe
Iain Bratchie	Katharine Medlow
Stephen Dias	Ralph Rayner
Jon Fox	Sir John Ritblat
Karen Hodson	Dame Theresa Sackler
Jerry Horwood	
	All of our Electric Circle Patrons and all who wish to remain anonymous.

## Honorary Lifetime Patron –

Sir Richard Sykes

## Additional thanks –

We would also like to thank all those who have named a seat in our historic Theatre.

## Corporate partners –

Advanced Research Clusters	Horiba
Agilent Technologies Foundation	KPMG
The Alan Turing Institute	National Physical Laboratory
AstraZeneca	Sonnedix
AWE plc	TikTok
Digital Science	University of Portsmouth
Embassy of the Kingdom of the Netherlands	UK Research and Innovation
Faraday Institution	UK Atomic Energy Authority

## Trust & Foundations –

Company of Actuaries Charitable Trust	The Farr Foundation
AG Manly Charitable Trust	LG Harris Trust
AM McGreevy No. 5 Charitable Settlement	Heilbronn Institute for Mathematical Research
The John S Cohen Foundation	The Rose Foundation
GM Morrison Charitable Trust	

## Other partnerships –

The Association of British Science Writers	The London Institute of Mathematical Sciences
The Association of Science Discovery Centres	The Open Society Foundation
The Grantham Institute for Climate Change	The Pseudoscience Group
The National Education Union	STEM Learning
	University College London

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**Ri merch store**

**@Ri\_Science**

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Registered charity number: 227938

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