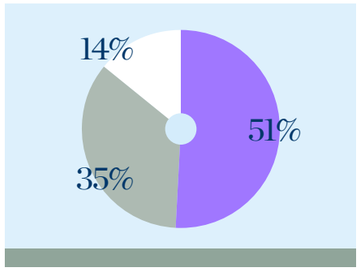
The Institute for Research in Schools

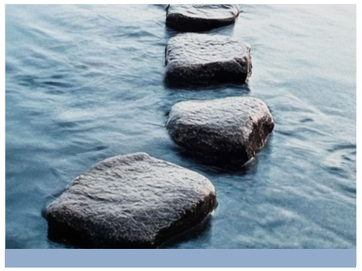
2025

IMPACT REPORT

IRIS

Contents





Welcome

Dr Jo Foster
Director
The Institute for Research in Schools

We are now seeking funders and partners. Join us in building the case for change.

It's been an exciting year for IRIS. Our student-led research projects are well established, giving young people meaningful opportunities to conduct real research year after year, and once again, we're delighted to share the results with you.

Building on this success and using our research projects as the learning engine of IRIS, we are now working to scale up and bring the benefits of authentic research to all young people. This year, we published the findings from our R&I Framework pilot. By presenting STEM subjects through a lens of research and innovation, the framework helped schools show entire year groups how they connect to the wider world. The results of the pilot were impressive, and we are now seeking £2.4m to expand the programme to reach 100,000 young people in schools across the UK.

With curriculum and assessment under review, there is a rare opportunity to make lasting change. We know that student-led research should be part of this change, and this report shows why.

Join us in building the case for change, so real research is part of every young person's education.

How we work

We get young people doing real research, contributing to knowledge today and solving the problems of tomorrow.

Our mission is to change the culture in UK education so that every young person experiences real research.

- We provide **opportunities for young people** to carry out research projects and share their findings with the real world.
- We **empower schools** to make research and innovation part of their culture.
- We collaborate with others to put **research on the national agenda.**

The IRIS team
July 2025

We believe that young people can, and should, contribute to addressing real world needs and challenges.

- We **support young people** in creating scientific knowledge and using it to solve problems.
- We help students **develop the skills** that are highly sought after by employers and lacking in the UK labour market.
- We foster young people's confidence and aspirations to **become researchers and innovators.**

Every day young people drift away from STEM. IRIS is changing the culture in STEM education so this doesn't happen.

Only 25%(1) of the STEM workforce are female and STEM isn't representative of the population, with disparities in gender, race and ethnicity. This, alongside ongoing issues that employers have in finding STEM skills and **725,000**(2) **potential new Net Zero jobs in STEM by 2030,** means something needs to be done.

(1) **25%:** UK Government (2024). Supply of skills for jobs in science and technology. Available at: explore-education-statistics.service.gov.uk/find-statistics/supply-of-skills-for-jobs-in-science-and-technology/2023

(2) **725,000:** Climate Change Committee (2023). A Net Zero workforce, p. 12. Available at: theccc.org.uk/wp-content/uploads/2023/05/CCC-A-Net-Zero-Workforce-Web.pdf

> "Students have had a chance to see what real world research is like and develop confidence and skills not available in the current science curriculum."
>
> *Teacher*
> **2025 partner school**

> "It's crucial that young people should – despite the allures of the 'virtual world' – have opportunities to learn via hands-on experiments in the real world, and to meet real scientists... that's why IRIS is so important, and its expansion is so welcome."
>
> **Lord Martin Rees**
> *UK Astronomer Royal and Patron of IRIS*

We have seen first-hand that a culture of STEM research and innovation in schools transforms students' experiences. Our Framework demonstrated this, growing research and innovation (R&I) in schools with impressive results.

The R&I Framework

Impact of R&I

> It's made a difference beyond just teaching, to my professional development and the way I interact with students, because I've seen them in these different scenarios, doing these different events. And because I've seen them show an interest, I've encouraged them in directions that I wouldn't have necessarily known to encourage them had we not been doing this.
>
> *Maths teacher*
> Participating pilot school

The UK's future depends on delivering a better experience of STEM for young people in school.

We have built on the success and impact of our school research projects to develop a new R&I Framework. The intention is that the Framework could be used in every school across the UK, empowering schools to make research and innovation part of the way that they deliver STEM.

We know that not every school has the time and capacity to embark on a year-long research project with every student. Our R&I Framework allows whole cohorts of students to benefit from engaging in subjects through an R&I lens.

Between winter 2022 and spring 2024 we worked with schools to roll out a pilot of the new R&I Framework with Year 9 cohorts. We provided support and guidance while also evaluating the impact of our approach on students, teachers and the whole-school STEM culture.

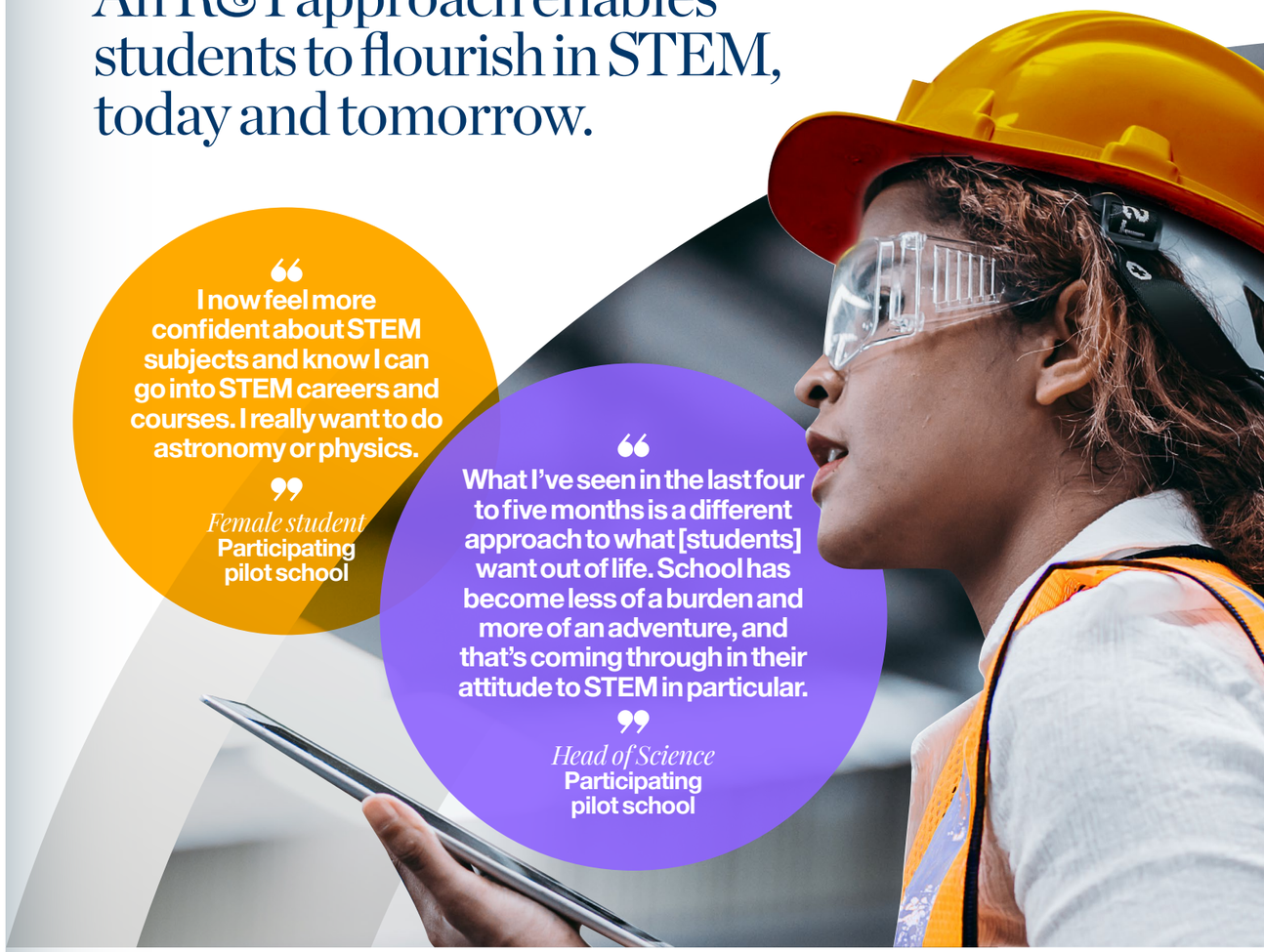
Students in participating schools completed surveys, and teachers used this data, along with self-reflective tools, to identify strategic priorities. With tailored training, support and guidance from IRIS, each school delivered unique activities to promote student engagement in STEM.

In addition to closely mentoring schools throughout the project, we encouraged schools to reflect on their existing STEM provision and supported them to develop and embed an R&I approach.

We worked with each school to provide STEM opportunities both in and out of the classroom. We linked each school with local industry and worked with teachers to deliver relevant and cost-effective extracurricular opportunities. In every case, STEM was embedded across the school in ways that were relevant to students' lives and future plans.

Imagine if every student in the UK had this opportunity. That's our ambition.

An R&I approach enables students to flourish in STEM, today and tomorrow.



> I now feel more confident about STEM subjects and know I can go into STEM careers and courses. I really want to do astronomy or physics.
>
> *Female student*
> Participating pilot school

> What I've seen in the last four to five months is a different approach to what [students] want out of life. School has become less of a burden and more of an adventure, and that's coming through in their attitude to STEM in particular.
>
> *Head of Science*
> Participating pilot school

We surveyed participating students before and after the pilot. Measuring change was essential to understand the impact of STEM research and innovation in schools.

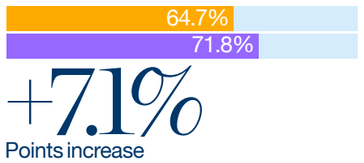
The results were impressive.

These graphs show the percentage of students agreeing or strongly agreeing with the statements. Analysis of these results shows statistically significant change. This means we can be confident that the changes we've seen are genuine.

1,297 student responses were matched across both surveys using a unique identifier.

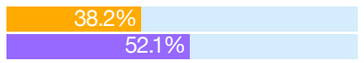
All students

Anyone can do science and be a scientist



+7.1%
Points increase

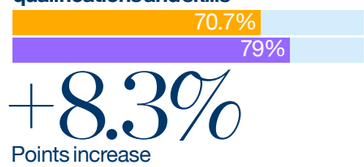
People like me work in STEM



+13.9%
Points increase

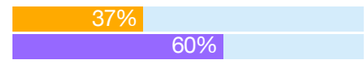
Female students

There are job opportunities in STEM for people with different qualifications and skills



+8.3%
Points increase

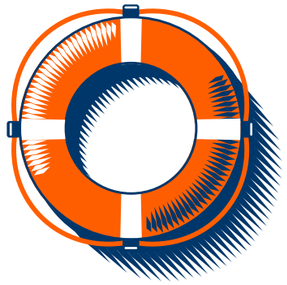
I know about the different routes into a STEM career



+23.2%
Points increase

Baseline End of project

Report summary



The problem

What's wrong in STEM

We're not growing a strong STEM workforce for the future.

We need STEM professionals for our economic prosperity (job growth in STEM fields) and to respond to societal challenges and opportunities (climate change, net zero, AI).

We're nudging young people out of STEM throughout their education, as a result of limited resources and opportunities, narrow pathways and stereotypes.

The UK's future depends on a better experience of STEM for young people in school.

Our solution

An R&I approach

IRIS designed the R&I Framework to help schools deliver STEM in a new way: through the lens of research and innovation (R&I).

R&I means producing knowledge (research) to solve problems (innovation). In schools, it means young people experiencing the real-world processes, applications and impact of STEM. It enables young people to develop more positive relationships to STEM.

In our pilot project, we rolled out the R&I Framework in schools across the UK. With IRIS' support, schools delivered a programme of R&I activities tailored to their students' needs.

researchinschools.org/framework

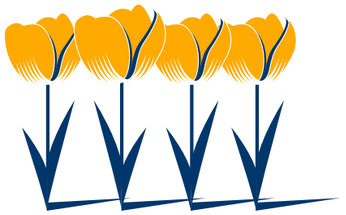
Read the full report online.

Our findings

Students, teachers & schools

IRIS measured the impact of the R&I Framework before and after the project, through surveys and interviews with students and teachers in participating schools. We found that the R&I approach:

- Prevented the decline of science capital
- Challenged negative stereotypes about who belongs in STEM
- Transformed young people's understanding of STEM careers —particularly among girls
- Empowered teachers to drive positive change across their schools.



Our future plans

Growing R&I in schools

We've shown our project works. Our next steps are to:

1. Build a movement for change
2. Secure funding to expand the project
3. Transform STEM education in the UK.

Join us in making the case for change, so that every child in every school has access to high-quality STEM education.

Our student research projects are free for UK schools. In 2024/25 we had nine active research projects for students to choose from: Big Data: ATLAS, Carbon Researchers, Cosmic Mining, DNA Origami, Earth Observation, Greener Fragrances, Future Flight, Wild Things and Original Research. We also piloted our new Elephants on the Move project.

Student research projects

Student research projects

Our reach

In the academic year 2024/2025 we have had more active research projects than ever before, including more schools taking part in the devolved nations. We are proud to report that over 92% of the schools we work with are state-funded.

> It was a really nice thing to do throughout the year and it felt like you were really making a contribution to the community.

Lucy
Student
The King's Academy

Since 2016

Nearly
10,000
Students have taken part in IRIS research

Nearly
500
Schools have run an IRIS project

More than
1,200
Research projects have been carried out by students

Joshua
Student
Altrincham Grammar School for Boys

> When you're doing work on something that you've truly picked yourself and that you've decided to do, it's a lot more fun. You can spend more time on it, and you can really get invested in it. I really enjoyed this IRIS project, I think it's the best thing I've ever done so far.

The past year

1,809
Students took part in IRIS research projects

93
Schools ran IRIS projects

257
Research projects have been carried out by students

53%
Of students who took part were female

Key
- Schools
- Partners

US

Switzerland

Blossom
Student
Liverpool Life Sciences UTC

> It's nice to think that even at our age we're making a difference to something that has a real impact. It gives a real powerful feeling instead of just something made up... it's something real, it's something that's actually doing something in the world.

92%
Of students involved in IRIS projects were state school funded. Up from 86% in 2023/24.

Student impact

> It surprised me how futuristic our medicine can get. I'm very interested in how it could improve in the future when there's more than just DNA origami... when there's also ionic origami!

Erica
Student
Derby College

We support UK secondary schools, sixth forms and colleges with our unique student research projects. This year students covered a broad range of topics, from researching the feasibility of using DNA origami to create logic gates for early prostate cancer detection, to understanding why consumers reject wonky vegetables. Many students told us they were able to explore areas of STEM they didn't even know existed.

After taking part in an IRIS project students said they:

83%
83%
Explored new areas of STEM

86%
86%
Were able to make a valuable contribution to research

77%
77%
Were more confident of their abilities in STEM

80%
80%
Think success in research is a team effort

87%
87%
Know more how STEM can make a difference to the real world

We received survey responses from 653 students and 102 teachers.

Finley
Student
Callington Community College

> We're growing up into a world that is facing these problems and so it's quite important that we try and fix them because that's the world we're going to be living in.

> Cornwall council wanted to go carbon neutral by 2030. I think these projects that we're doing, that other colleges are doing, are really beneficial towards achieving that goal. Trying to find more sustainable renewable sources to combat climate change is really really cool.

Henry
Student
Truro and Penwith College

Teachers said their students:

100%
100%
Have a greater understanding of the real-world applications of STEM

100%
100%
Have become more resilient

98%
98%
Are more engaged and motivated in STEM subjects

100%
100%
Increased their science capital

Science capital

Science capital refers to all the science-related knowledge, attitudes, experiences and resources that a person accumulates throughout their life. It is made up of things like going on trips to museums, knowing people who work in scientific professions and participating in extracurricular science activities.

Building skills

When students do research, they build their transferable skills. We asked students and teachers about the impact of IRIS projects on students' transferable skills like listening, speaking, problem solving, creativity, adapting, planning, leadership and teamworking.

After taking part in a research project, students report improvement to these transferable skills with female students reporting that their transferable skills improved significantly more than boys ($p<.001$).

Students consistently describe their research project as an experience that has helped equip them with competencies that they believe will benefit them in education, future careers, and everyday life:

"I learned a lot from completing an IRIS project, not restricted to science-specific skills such as research, referencing and technical skills but extending to more general skills such as communication, teamwork and problem solving." (Year 10 female student)

If you have someone beside you, a whole group, you're going to enjoy it.

Grace
Student
Canon Slade CofE School

I would say that by doing this project, I have gained a wide range of transferable skills, such as communication, collaboration, time management and data analysis which I can use later on.

Female student
Year 10

85%

85%

Of students said they got better at sharing ideas with others

87%

87%

Of students said research can be hard work but is rewarding

Teacher and school impact

The impact of doing STEM through real research is felt across the whole school.

Teachers tell us that it shifts the dynamic of the classroom and students feel empowered to lead their own learning.

It allows you to have a different relationship with students. They have taught me things! I'm not the expert and I like that they can see that.

Teacher
Participating school

Teachers told us that doing an IRIS project:

92%

92%

Enriched their working relationships with their students

73%

73%

Made them feel more positive about teaching

100%

100%

Helped to raise the profile of STEM in school

100%

100%

Supports a culture of research in the school

100%

100%

Provides students with opportunities they haven't had before

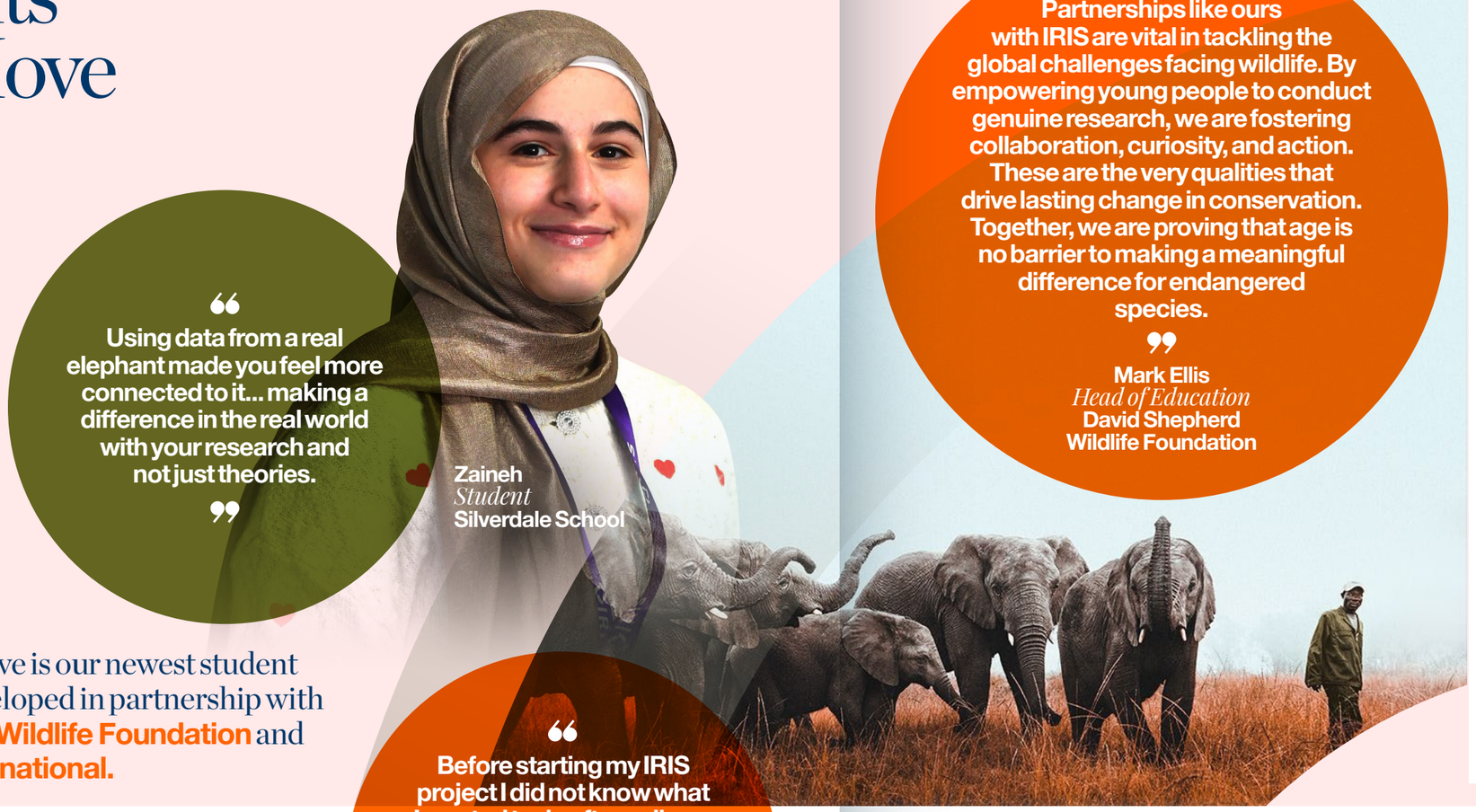
95%

95%

Helps to develop cross –curricular working

We received survey responses from 653 students and 102 teachers.

Elephants on the Move



> Using data from a real elephant made you feel more connected to it... making a difference in the real world with your research and not just theories.
>
> **Zaineh**
> *Student*
> **Silverdale School**

> Partnerships like ours with IRIS are vital in tackling the global challenges facing wildlife. By empowering young people to conduct genuine research, we are fostering collaboration, curiosity, and action. These are the very qualities that drive lasting change in conservation. Together, we are proving that age is no barrier to making a meaningful difference for endangered species.
>
> **Mark Ellis**
> *Head of Education*
> **David Shepherd Wildlife Foundation**

> Before starting my IRIS project I did not know what I wanted to do after college. But now I do by going to university and studying ecology and then zoology.
>
> *Student*
> **Participating school**

Elephants on the Move is our newest student research project developed in partnership with the **David Shepherd Wildlife Foundation** and **Game Rangers International.**

Students investigate the movement and behaviour of orphaned elephants in Zambia's Kafue National Park using real GPS tracking data provided by conservationists.

The elephants, rescued due to poaching and human-wildlife conflict, are rehabilitated through a decade-long process before being released into the wild. Students analyse the data to understand daily and seasonal patterns, home ranges and potential migration corridors. This hands-on project introduces modern conservation techniques and gives students a chance to contribute to genuine research. It also builds awareness of habitat loss, poaching, and human-elephant conflict, linking science learning to urgent global challenges.

The project, which runs over a full academic year, representing around 30 hours of engagement per student, has been piloted during 2024/25 with 63 students in three state-funded secondary schools.

Elephants on the Move is one of many IRIS real research projects. See them all at **researchinschools.org/projects.**

> Our collaboration with IRIS opens an exciting gateway for young people to step directly into the world of conservation research. By working with real-world data, students aren't just learning about biodiversity, they're becoming active contributors to its protection. This hands-on experience builds skills, confidence, and a deeper connection to the natural world, inspiring the next generation of environmental problem-solvers.
>
> **Georgina Lamb**
> *CEO*
> **David Shepherd Wildlife Foundation**

DAVID SHEPHERD WILDLIFE FOUNDATION

After the pilot project, students reported:

100%
100%
Their experience of doing the project was 'good' or 'very good'

100%
100%
That the project helped them develop important skills for their future

85%
85%
That being a researcher would be an interesting career

89%
89%
They felt they had a better understanding what it might be like to study STEM at a higher level

96%
96%
They felt more knowledgeable about jobs in wildlife conservation

93%
93%
They now know how STEM can make a difference in the real world

We received 31 student evaluations. 68% were female.

Conferences

Manchester

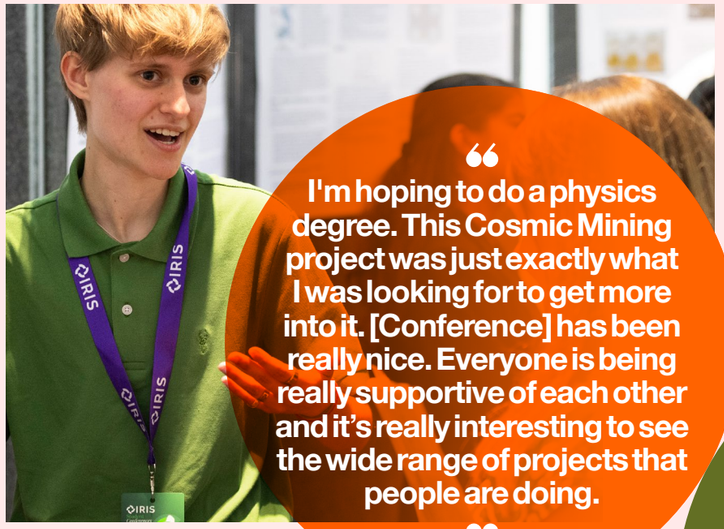
At conference students share their research with peers from other schools and the wider academic community. Every year we see students inspired by the fact that they are actively contributing to the science of tomorrow and 2025 was no different...

Linsey
Student
The King's Academy

Linsey's research group followed the DNA Origami project pathway. They chose to look at the use of nanostructures in therapeutic approaches to treat plant disease. Their aim was to use synthesised DNA structures to develop a treatment for the plant disease bacterial wilt.

> **"We thought it wouldn't work and that our skills weren't enough, but they were. When we were at the conference a lot of people did come up to us and they did say how our work would impact the world and it just made it more real."**

London



> **"I'm hoping to do a physics degree. This Cosmic Mining project was just exactly what I was looking for to get more into it. [Conference] has been really nice. Everyone is being really supportive of each other and it's really interesting to see the wide range of projects that people are doing."**

Oliver
Student
HSDC Alton

Oliver presented research on interesting or anonymous objects found in sets of large data from the Spitzer Space Telescope because **"space is really interesting and largely unexplored."** In our Cosmic Mining project, young researchers like Oliver learn how to examine and classify stellar objects based on the light they emit. Their work contributes to the first fully classified catalogue of these sources, which will be an extremely valuable resource for astronomers.

This year

100%
Of teachers rated the conferences as good or very good

96%
Of students felt part of a research community

94%
Of students felt inspired about different careers in STEM

Exeter

Connor, pictured right, presented his research on **'Leveraging Machine Learning AI for the greater good in Mountain Search and Rescue.'** The room was captivated by the detail and depth of his research, and its real world application.

Many attendees commented on the community feel of conference. Presenting their own research empowers students and develops soft skills needed for their future.

690
Students attended conferences in Exeter, London and Manchester, +8% from 2024

243
Research posters were presented by students to their peers, teachers and the wider scientific community

> **"It wasn't as nervewracking as I thought. I was so focused. I'd accrued such a passion, such a knowledge behind this, that it felt really good to finally get it from my computer out to an audience."**

Connor
Student
Camborne Science & International Academy

"Perhaps the clearest memory I came away with was simply this; I felt as though I was witnessing some of the finest scientists of tomorrow taking their first steps on a career path that knows no bounds. If the UK is to become a 'science superpower', young and brilliant minds such as those I listened to will surely be at the forefront of that movement. More schools should look to the IRIS approach to help achieve that goal."

Michael Thame
ScienceVega

Contents

IRIS futures

Inspiring STEM careers

> Having a more detailed and hands on look at chemistry can definitely help overall understanding. Since the start of this project, I have a much better understanding overall, and more engagement with the subject, now that I am actually experiencing what it's like to work in a lab.

Louis
Student
Graveney School

Caisie
Student
Truro and Penwith College

> When we got to go into the labs... I think it was really eye opening. Especially for me because I don't do geology specifically so it opened up potential new career paths and subjects at university that I could look at.

After completing an IRIS project, there was a statistically significant increase in students agreeing that **"being a researcher would be an interesting career"** (p=.002).

Taking part in IRIS projects has once again shown to be a transformative experience for many students. Experiencing real research has opened new career paths and future study options. Hands-on lab experience has been particularly impactful, with students expressing a newfound interest in research careers and a deeper connection to STEM subjects.

Students agree that they now know:

73%

73%
What it is like to work in STEM

72%

72%
They are interested in a career in STEM

Teachers said that students were:

96%

96%
More aware of the range of jobs and careers in STEM

94%

94%
More aware of the diversity of people working in STEM

We received survey responses from 653 students and 102 teachers.

IRIS alumni – *Dhara Mistry*

Dhara Mistry took part in an IRIS project whilst at Dixons Sixth Form Academy, Bradford. She is now working as an Apprentice in Laboratory Sciences at Unilever, and we invited her to join our panel of guest speakers at the conference in Manchester.

Dhara Mistry
Apprentice
Laboratory Sciences, Unilever

> It seemed like quite an abstract thought at first as to what real science involved but now that I've done a research project and now that I'm working in science it doesn't seem as abstract as what I thought it would be.

"It's a full circle moment. Once I was a student doing an IRIS project, and now I've come back as a panellist."

Dhara's journey highlights the profound impact of practical research projects in bridging the gap between abstract scientific concepts and real-world applications, fostering both professional growth and confidence.

Whilst all of our conference panellists show students the real-world applications of STEM subjects, it was very special to welcome Dhara back so soon after her completion of an IRIS project. Students could see themselves in her shoes and follow her example.

> Seeing Dhara being able to get a plan organised, brought to fruition and presenting it in such a professional forum I think added to both her confidence and ability to communicate her scientific knowledge.

Jayne Pierre
Teacher
Dixons Sixth Form Academy

Supporters

> The work that IRIS does is incredibly important... young people get an opportunity to roll up their sleeves and get hands-on with science. The opportunity to ask a question, investigate it, and have real agency. It's such an important part of what makes a high quality science education.
>
> **Hannah Russell**
> *Chief Executive*
> **The British Science Association**

> Partnering with IRIS has been an eye-opening and uplifting experience. Our professional researchers are often amazed at the curiosity, inventiveness, and ability of the school-student researchers!
>
> **Professor Alan Barr**
> *University of Oxford, Physics*

> We've already seen that some of the students have benefited enormously from this opportunity. Future flight is extremely exciting and being able to inspire the next generation of scientists and engineers is very rewarding.
>
> **Pablo de Felipe**
> *Zero Avia*

> I am deeply impressed by The Institute for Research in Schools' work, including empowering students to conduct original research in genomics, biomedical science, biotechnology, ecology, environmental monitoring, and even DNA engineering—hands-on experience that is shaping the innovators and scientific leaders of tomorrow in the life sciences.
>
> **Dame Kate Bingham**
> *Managing Partner at SV Health Investors and Patron of IRIS*

To the organisations who support us through funding, in-kind donations and working partnerships...

Natural History Museum · University of Oxford · Henry Royce Institute · Royal Society of Chemistry · Queen's University Belfast · UCL

David Shepherd Wildlife Foundation · The Francis Crick Institute · CERN · ZeroAvia · Treezilla · Science and Technology Facilities Council

Innovate UK · Royal Microscopical Society · James Webb Space Telescope · Sense · Centre for Polar Observation and Modelling · the Bragg Centre for Materials Research

Science & Technology Facilities Council Rutherford Appleton Laboratory · Hitachi Inspire the Next · The Open University · Oxford Instruments · UK Space Agency · carbon footprint

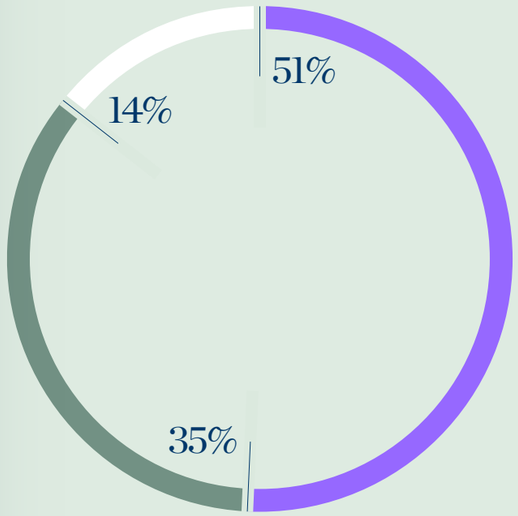
STEM Learning · British Science Association · University of Leeds Bragg Centre for Materials Research · GRI

Thank you

Finances

How we spend our funds

- School support
- Strategic & operational support
- Office & overheads



Between September 2024 and August 2025 we continued to grow, which is demonstrated throughout this impact report. During conference season we saw an 8% increase in student attendance.

We have developed our strategic ways of working and continue to use our research projects as a learning hub for the direction and pace of IRIS' next steps.

We shared the success of our R&I Framework pilot this year, with wide-reaching support, and we are now seeking £2.4 million over four years to expand the impact, reaching 100 schools and over 100,000 students.

Expenditure increased to include an increase on salaries as we continued to build the team to meet strategic objectives and respond to demand. We employ 17 people across the UK, working remotely and in offices in London and Birmingham.

The Trustees review the delivery of operational plans and the associated budget with the Director and the Senior Leadership Team at each Trustees meeting.

Accounts

	2024/25[1]	2023/24	2022/22[2]	2021/22	2020/21
Expenditure on charitable activities	£1,441,000	£1,355,00	£1,441,000	£722,000	£531,000
Net funds by year end	£761,000	£781,000	£561,000	£294,000	£376,000

(1) Projected figures
(2) A 17 month period from April 2022 to August 2023

We want to change the culture in UK education so that every young person experiences real research.

R&I is the side of STEM that's exciting, dynamic and relevant to our lives. But all too often, it's not part of young people's experience of learning these subjects at school. So it's not surprising that many do not see a future for themselves in STEM.

Approaching STEM through an R&I lens can change young people's lives and society as we know it. We want all young people to enjoy the benefits of a research-led approach to STEM education in schools.

Our R&I Framework pilot project demonstrated that evidence-driven action leads to real improvements in STEM engagement, and that happened across just one year. Imagine what we could achieve over four years, with automation of processes and a dedicated team.

We are now seeking funding and partners to expand the impact of our R&I Framework.

researchinschools.org

Join us in shaping the future of STEM in schools and securing the UK's next generation of researchers and innovators.

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