The Institute for Research in Schools

Teacher Guide

IRIS

IRIS was founded on the belief that young people have the capacity to change the world.

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Introduction

When education empowers young people with the tools, they can contribute to the community of scientific research right now.

Since 2016, we've worked with leading universities and industry to create ways for school-aged students to get involved in today's research projects.

Our projects are free for UK state schools and fully supported by our team. They are suitable for students of all ages and abilities from secondary school to sixth form and college. They cover a vast range of subjects from coding to chemistry and geography to particle physics - so students can explore subjects that interest them.

We've designed our projects to launch in the autumn and wrap up before our summer conferences. But schools can choose a timeline that suits them.

Most schools run IRIS projects as an additional session, often after school or at lunchtime. Others run them within timetabled lessons or for Extended Project Qualifications. How you run your research at your school is entirely up to you and what works best for you and your students.

Whether you need advice on picking a project, designing a research poster for our conferences, help getting your head around an unfamiliar subject or anything else; our Regional School Engagement Leads are here to support you. As former teachers, they understand the challenges of the profession and will be eager to help or point you in the right direction.

Meet our engagement team

Anne O'Leary
Regional Lead

Dr Neil Garrido
Regional Lead

Mike Grocott
Regional Lead

Our reach

In the academic year 2024/2025 we 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.

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.

This 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

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

IRIS projects

Whether student research is a new concept in your school or you have an existing culture of research; we have projects to suit different year groups and interests.

All our projects have suggested age guidelines to help you choose the best projects for your students. But with additional teacher support, there is no reason students couldn't do a more advanced project.

We suggest starting small; choose one project for a few students and see how it works. Once you and your students become more confident with the project, you can invite more students to join the following year. Maybe consider working with other STEM departments on cross-curricular research, including computing, design, geography or maths.

Students can either work in groups or individually. We support those doing original research projects too. This could be an extension to a previous IRIS project or a novel research idea in a completely different field – we encourage all paths. Our projects can form the basis of an Extended Project Qualification (EPQ) or other student awards, like CREST. Many schools have used our projects as an enrichment activity, allowing students to set up their own research groups with minimal support from teachers.

Our charity provides support and assistance to make facilitating research in school as easy and simple as possible. You don't have to be an expert in the area your students are researching. We have a team of specialists that can help. You can reach out to our Regional School Engagement Leads at any time.

Getting started

Join 1

Register online:
https://researchinschools.org/join/

Let's talk 2

We'll be in touch to arrange a time to talk through our projects and discuss how we can support you.

Agree a plan of action 3

Together we'll agree the best plan for your school. To garner your school's support, we'll send you an online agreement to complete.

Get prepared 4

Once we have your agreement, you'll receive login details for the IRIS Resource Centre, where you'll find our project resources.

Tell us who's taking part 5

Once you've scanned through the Phase 1 documents on the Resource Centre, submit the student registration form.

Check-in 6

Get in touch with your Regional School Engagement Lead to talk about resources, ask questions and share any concerns.

Set expectations 7

Complete the teacher and student online surveys to set your students' expectations for the year.

Keep informed 8

Look out for our 'Month ahead' emails from **info@researchinschools.org,** with updates and news, including the latest webinars and events.

Flexible timeline

Our research projects are designed to run through the academic year. However, schools are welcome to register at any point. Many join in the autumn term (or even before the summer break) to ensure students have sufficient time for their research.

Phased, flexible timeline

There is, of course, flexibility in this timeline. Teachers can run projects to suit staffing capacity and other school commitments – whether that's starting a project mid-year or spanning research across two academic years.

Project phases

To empower students to work independently, IRIS projects follow four phases. Each project has its own resources and guides for each phase, which can be accessed online through the IRIS Resource Centre. This includes the student registration form, links to evaluation surveys and the Phase 1 Introduction booklet.

Phases

1 Preparation & pick a project

After teachers get students on board and choose their project (we have material to help you do this), it's time to prepare and launch the project.

You can find all the materials you and your students will need to get started on the Resource Centre.

2 Background research & skills development

With teachers' support, students develop the knowledge and skills required to successfully complete research using guides and resources found in the IRIS Resource Centre.

Some IRIS projects feature various tasks and activities for students to complete. Teachers will need to submit these before moving on to the next phase.

3 Student research

Students should be ready to get started on their research. They'll systematically investigate, record, analyse and establish their conclusions.

4 Artefact development & conference

Time for student researchers to communicate their findings by producing an artefact - an academic paper, poster or presentation. They can find guides and templates in the Resource Centre.

We encourage students to develop a poster to communicate their work so far - even if they plan to continue their project. Schools can showcase posters an IRIS Student Conference, which runs at the end of the academic year.

Student conferences

Our annual conferences are a chance for IRIS students to share their research with their peers from other schools and the wider academic community.

Like most academic conferences, the day features poster sessions, research presentations, a keynote speaker and a panel discussion with real researchers.

Whether preparing or taking part, the conference experience strengthens self-confidence, builds communication skills and fosters collaboration with like-minded individuals. To support schools, we offer guides and templates for preparing academic posters and presentations and provide feedback for those wanting it.

IRIS conferences are free to attend and every project group gets their poster printed. Registration opens in spring. Once you are registered with IRIS, further details for conference can be found on the IRIS Resource Centre.

More information can be found on the IRIS website.

694

Students from 67 schools attended the IRIS conferences 2025

> **Students are doing really well-motivated work, using advanced and appropriate methods and tools, most familiar to those at graduate level.**
>
> **Alan Barr**
> *Professor of Particle Physics*
> **Oxford University**

> **It's good as we're all pushing ourselves out of our own comfort zones.**
>
> **Mehreen**
> *Student*
> **Lampton School**

91%

Of students registered for conference were from state funded schools, sixth forms or colleges

98%

Of teachers agreed that students gained the experience of a real research conference

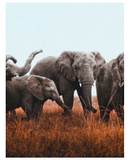
> **It's really nice to see the students' work displayed. It's something they can be really proud of.**
>
> **Samantha Costa**
> *Teacher*
> **Cumberland School**

> **It's nice to see the different opinions from other schools and the approaches they take to their research.**
>
> **Yumi**
> *Student*
> **Camden School for Girls**

After each academic year we give awards to celebrate student research, from young people's outstanding work to the teachers and partners that make it possible. Award nominees are selected at the end of each academic year, following conferences.

Explore our projects

*Age suitability



Elephants on the Move

*12+

Discover how GPS tracking is helping conservationists develop a greater understanding of the movement patterns of elephants. Students will learn how to monitor an orphaned elephant from its time in a rehabilitation facility through to being released into the wild.

DNA Origami

14+

Students explore the use of DNA as building material and discover it's much more than biological code. They learn to fold DNA into unusual shapes, using computer software, to explore potential uses of bionanotechnology.

Earth Observation

14+

Student researchers track the Earth's shifting terrain through satellite images, uncovering the wealth of data available to them, including glaciers, floods, fires or forests. Students are challenged to analyse data collected from a range of wavelengths and processes to consider how and why it changes over time.

Original Research

14+

Using IRIS' Original Research guides, students formulate their own scientific questions and carry out the research. Our project materials support those working towards the extended project-based qualification (EPQ), the CREST award or the Scottish Interdisciplinary Project Unit.

Greener Fragrances

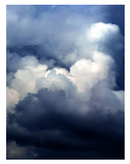
16+

Post-16 chemistry students develop their practical skills synthesizing ionic liquids and investigating their properties. Students will explore how these chemicals can be used to make the production of esters more efficient and sustainable - a process commonly used in the manufacturing process for scents and food flavourings.

Wild Things

12+

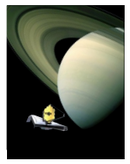
Students explore the biodiversity of their local area and develop ways to support and improve its health. Their findings will contribute to scientists' understanding of how to better conserve local biodiversity and ensure that wildlife thrives through habitat restoration and sustainable management.



Carbon Researchers

12+

Students measure their school's carbon footprint, using surveys and online tools, then work on a strategy to reduce it. The project introduces them to the role that human activity plays in climate change and the complexities of behavioural solutions.



Cosmic Mining

14+

Students help astronomers identify stellar objects. Using data from the Spitzer Space Telescope, they analyse objects based on the light they emit (spectral analysis). Their work will help scientists narrow down targets for the James Webb Telescope – the most powerful telescope to ever be built.

Future Flight

14+

Join the global challenge to make aviation more sustainable through zero-emission flight. Students will explore aerodynamics and hydrogen-electric propulsion, before using industry-standard software to find economical and efficient ways for hydrogen tanks to be retrofitted onto a Boeing 737 aircraft.

Big Data: ATLAS

16+

This project introduces students to the analytical and coding methods used by particle physicists. They learn how to interpret ATLAS Open Data from CERN's Large Hadron Collider – including how to evidence the Higgs boson – and formulate their own questions using Python computer programming.

We want to change the culture of UK education so that every young person can take part in authentic research and innovation while at school.

Any questions
Please get in touch
Email:
info@researchinschools.org
Website:
researchinschools.org
BlueSky / X:
@ResearchInSch
LinkedIn:
The Institute for
Research in Schools