Association for
Science and
Discovery Centres

Demystifying AI Case Studies Report

2026

Contents

Foreword

Demystifying AI: From Algorithms to Everyday Life demonstrates how nationally coordinated, regionally delivered public engagement and participation can strengthen public attitudes, build confidence and agency, and increase understanding of how emerging technologies can benefit people and communities across the UK.

From January to April 2026, we tested a rapid, scalable model for engaging the public with Artificial Intelligence (AI) through trusted, local institutions.

Fifteen Science and Discovery Centres and Museums brought together interdisciplinary researchers from across all UKRI mission areas, alongside wider business, education and community partners, to support the public's involvement with science and emerging technologies.

Centres used hands-on activities, facilitated conversations, "Meet the Researcher" events, creative and immersive spaces, local scientific case studies and community-based delivery to enable audiences to explore AI critically and collaboratively.

They transformed AI from an abstract, complex and intimidating concept into something playful, accessible and relevant to everyday life.

Across all 15 projects, the programme generated a remarkable sense of curiosity and participation among audiences of all ages. Children and adults trained machine-learning models, experimented with robotics and chatbots, explored AI in astronomy and biodiversity, and debated ethical questions around trust, creativity and the future of work.

The programme significantly exceeded expectations. Within just four months it reached more than 70,000 participants through 1,094 events and activities, including over 44,000 children and young people, 24,000 adults, 294 schools, and 82 community groups across all four nations of the UK.

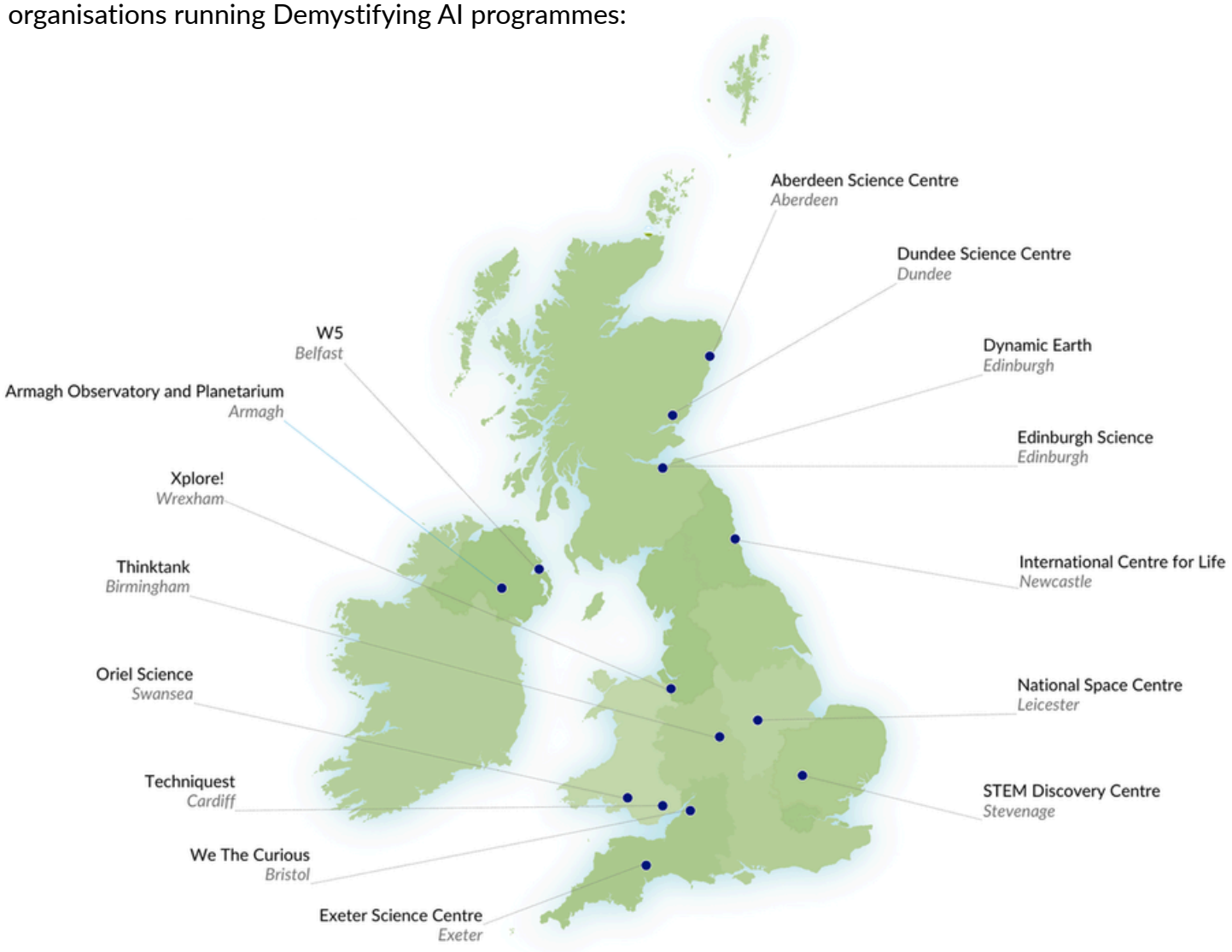
The programme achieved measurable impacts on public confidence and understanding. As a result of participating, 75% improved their understanding of AI's capabilities and limitations, 65% felt more able to critically evaluate AI, 64% reported greater confidence about when to trust AI, and perceptions of AI's public benefit increased from 52% to 68%, with negative perceptions falling from 32% to 10%.

The 2025 Public Attitudes to Science survey (PAS 2025) demonstrated that information alone does not build trust in emerging technologies. We believe that trust can be built when people are able to participate, ask questions, test technologies, discuss ethical concerns and engage directly with local science, researchers and innovators that are relevant to them.

Demystifying AI was created by the Association for Science and Discovery Centres (ASDC), partnering with 15 Science and Discovery Centres and Museums across the UK. It was funded by UK Research and Innovation (UKRI), with support and guidance from the Science and Technology Facilities Council (STFC, part of UKRI).

Demystifying AI around the UK

Map of the UK showing the 15 science engagement organisations running Demystifying AI programmes:



Scotland

Aberdeen Science Centre, Aberdeen

Dundee Science Centre, Dundee

Dynamic Earth, Edinburgh

Edinburgh Science, outreach

England

Exeter Science Centre, outreach

International Centre for Life, Newcastle

National Space Centre, Leicester

STEM Discovery Centre, Hertfordshire

Thinktank, Birmingham

We the Curious, Bristol

Northern Ireland

Armagh Observatory & Planetarium, Armagh

W5 Science and Discovery Centre, Belfast

Wales

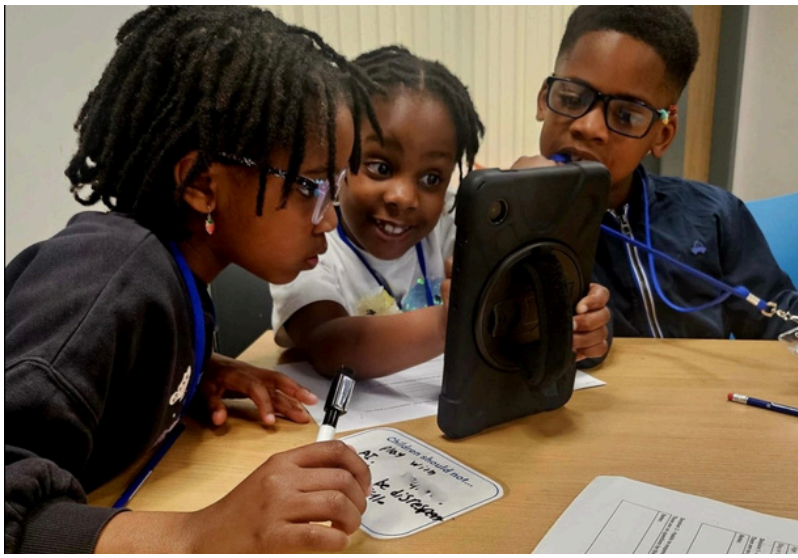
Oriel Science, Swansea

Techniquest, Cardiff

Xplore! Science Discovery Centre, Wrexham

Case studies from Scotland

Exploring an artificial world at Aberdeen Science Centre



At Aberdeen Science Centre, young people and community groups were invited to look beyond the headlines and discover how artificial intelligence shapes the world around them. Through free workshops, holiday clubs and 'Meet the AI' Scientist events, participants explored how AI learns, how to recognise when it is being used, and how people play a vital role in developing and training AI systems. Hands-on activities using tools such as Google's Teachable Machine and Micro:bit Create AI brought abstract concepts to life, while researchers and practitioners shared inspiring examples of AI in action, from social robotics to wildlife conservation.

The programme was designed to be accessible and engaging for a wide range of learners. Activities combined discussion, practical exploration and technology-free exercises, ensuring confidence with digital tools was not a barrier to participation.

Staff adapted sessions to meet different learning needs, providing flexible ways for children to engage. Feedback highlighted how valuable participants found these opportunities, with comments such as "really well explained topic" and another praising the programme as an "excellent opportunity" for young people.

One of the most significant outcomes was helping participants move beyond seeing AI as simply a tool for generating images or answering questions.

By introducing real-world examples from healthcare, agriculture and environmental research, the programme challenged perceptions and encouraged deeper thinking about AI's potential for public benefit. The project also sparked new partnerships and laid the foundations for future AI-focused activities, leaving Aberdeen Science Centre better equipped to continue supporting audiences to engage confidently with this rapidly evolving technology.

> This project opened the door for us to begin discussing AI with our audiences. Discussions with project participants and observations during activity engagement reaffirmed the value of accessible interactions with STEM in building confidence and understanding with complex topics.
>
> We were inspired by the breadth and depth of engagement opportunities that the topic of AI provides, and we look forward to expanding our network of partners and our catalogue of AI-focused activities so that we can continue to explore the ever-changing technology landscape with our audiences.
>
> — Calli Buchanan, Visitor Experience Manager, Aberdeen Science Centre

Beyond wonder - exploring AI together at Dundee Science Centre

At Dundee Science Centre, families were invited to explore artificial intelligence through the interactive “Fact or Fiction: AI Show”, a lively gameshow-style experience that reached more than 3,600 people. Designed for children and their families, the show combined audience participation, hands-on demonstrations and real-world examples to introduce concepts such as machine learning and AI applications.

Alongside the show, around 200 primary school pupils took part in the Lord Provost STEM Inspiration Award, imagining how AI could shape life in 25 years’ time. The competition winner suggested using AI to sort rubbish into plastics, paper, food and general waste, with runners up reimagining productivity with a multi-tasking robot octopus and questioning how we might improve agriculture through a solar-powered fruit-picking robot.

For many participants, the programme provided a first opportunity to engage meaningfully with AI. Recognising that audiences arrived with different levels of confidence and prior knowledge, Dundee Science Centre created an experience that assumed no previous understanding of the technology. Children became active contributors rather than passive observers, helping train AI models, taking part in demonstrations and sharing their own ideas about the future.

Families responded positively, with one parent commenting that the AI show “really captured my child’s attention”, while another praised the experience for being accessible across age groups and suitable for their autistic son.

The project demonstrated the value of creating inclusive spaces where children can explore emerging technologies on their own terms. Working with audiences from communities experiencing high levels of deprivation, the team focused on building confidence, curiosity and a sense of belonging before introducing more complex STEM concepts.

The programme also left a lasting legacy within the organisation itself, increasing staff confidence in discussing AI and inspiring plans to adapt activities for outreach programmes, holiday clubs and community partnerships. By making AI approachable, relevant and fun, Dundee Science Centre helped young people see themselves as part of the conversation about the technologies shaping their future.

> There's a learning curve to understand how best to communicate these complex concepts to kids, so I think the more I do the show the better it will get.
>
> — Internal staff feedback

‘AI and the sky’ - looking to the stars and the future at Dynamic Earth, Edinburgh

At Dynamic Earth, families, school pupils and community groups explored artificial intelligence through a series of experiences that connected cutting-edge technology with real-world discovery. Participants encountered AI through the immersive planetarium show ‘AI and the Sky’. They also met the people shaping its future, through careers events and online sessions with robotics researchers Dr Emilia Sobolewska and Dr Carl Strathearn, who specialise in human-robot interaction and building and programming respectively. One pupil described Dr Carl as a “cool guy” who started building robots from materials in his bedroom, while others left feeling inspired to become “robot supporters”.

The planetarium show alone reached more than 2,700 people, revealing how astronomers use AI to analyse vast amounts of data and uncover new insights about the universe.

The programme focused on making AI relevant, accessible and inspiring. Learners could ask questions directly to scientists, explore hands-on activities in the Digital Innovation Zone and discover the many different pathways into careers involving AI. Rather than presenting AI as a distant or abstract concept, the team connected it to topics participants already cared about, from space exploration to robotics.

Teachers reported that the experiences offered opportunities that pupils “don’t have in school” and noted how excited learners became about science and the possibilities of STEM careers.

Perhaps most importantly, the project created space for honest conversations about AI at a time when public perceptions are changing rapidly. Educators encountered curiosity, excitement and, at times, scepticism from audiences trying to make sense of the technology's growing influence. By grounding discussions in real scientific applications and introducing participants to the people behind the technology, Dynamic Earth helped audiences move beyond headlines and speculation.

The project has already sparked new scientific partnerships and wider organisational conversations about the responsible use of AI, creating a strong foundation for future engagement with one of the defining technologies of our time.

> “Demystifying AI was a great opportunity for us to begin exploring the topic of AI with a range of different audiences at our science centre. As AI permeates news stories more and more often, it has given us the opportunity to open that dialogue with audiences, engaging them with topical science in a range of different ways.”
>
> – Chris George, Head of Learning and Engagement, Dynamic Earth

Making AI part of everyday family conversations at Edinburgh Science Festival

At the 2026 Edinburgh Science Festival, families and young people were invited to explore artificial intelligence through 'Tech Decoded', an interactive drop-in space at the National Museum of Scotland. Using hands-on activities, creative challenges and conversations with science communicators, visitors discovered how AI works and how it influences everyday life. Participants trained machine-learning models, experimented with robotic 'cubelets', explored how information travels across the internet and investigated how AI systems recognise patterns and objects. By turning complex ideas into practical experiences, the programme helped audiences engage with AI in a way that felt approachable, relevant and fun.

The experience was carefully designed so that everyone could understand and engage with it, regardless of age, background or prior knowledge. Science communicators adapted conversations to suit different interests and levels of understanding, while clear visual guides and self-led activities created multiple ways to participate.

Rather than simply presenting information, the team encouraged visitors to ask questions and reflect on how AI affects society, helping families connect emerging technologies to real-world issues such as accessibility, sustainability and decision-making.

This discussion-based approach reflects Edinburgh Science's established practice of promoting critical thinking and reflective learning rather than passive consumption of content. Visitors praised the approachable and knowledgeable staff, with participants commenting that activities were "well explained at a level children could understand and participate in."

The project's most lasting impact was helping visitors feel more informed and confident about AI. Evaluation showed that 65% of participants felt they had improved their understanding of AI, while more than half reported feeling better equipped to question and think critically about the technology. By creating opportunities for exploration, discussion and reflection, 'Tech Decoded' helped move AI from being a distant or unfamiliar concept to something participants could understand, discuss and relate to in their own lives. The resources and approaches developed through the project will continue to support future festivals and community engagement programmes, extending its impact well beyond the festival itself.

> 'Tech Decoded' provided a great opportunity for science communicators who were not confident in their understanding of AI to develop knowledge and skills which they can share with both the wider community and relate to their own lives.
>
> — Augusta MacDonald, Senior Event Developer

Case studies from England

Creating space for conversations about AI in community spaces, Devon

Exeter Science Centre created a travelling pop-up exhibition that invited people of all ages to explore artificial intelligence through hands-on activities, discussion and local research stories. Delivered at four events alongside a series of online livestreams with AI researchers, the programme tackled topics ranging from machine learning and generative AI to the environmental impacts of technology and the role of AI in biodiversity monitoring.

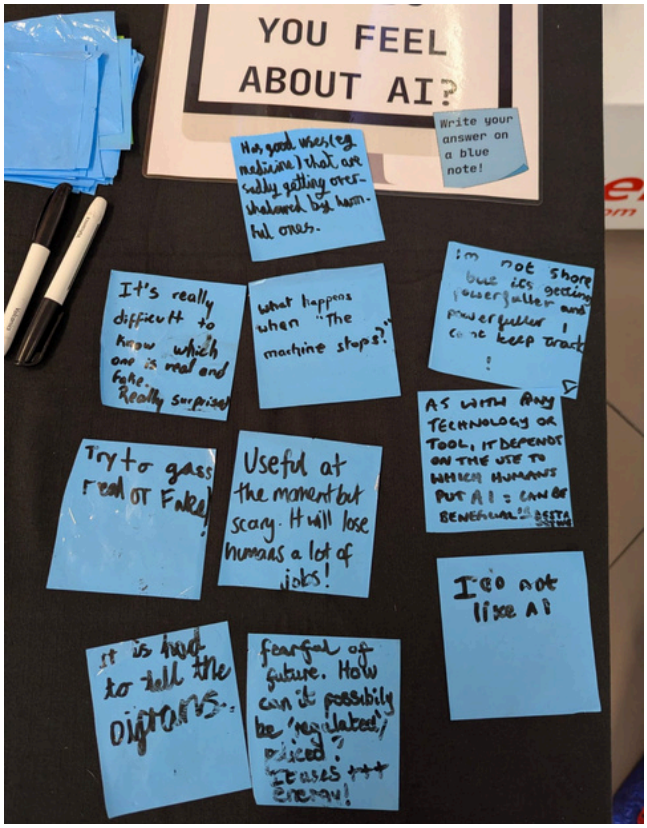
Visitors could test the training of a machine-learning model to identify invasive species, experiment with creative AI-inspired collage making and share their own thoughts and experiences of AI.

> Thanks very much. It's stimulated me to try and understand better the pros and cons of AI, e.g. in philosophical or economic terms.
>
> – Visitor feedback

> I thought this would be good for me kids, which it was, but also I was challenged and learnt lots too!
>
> – Visitor feedback

By combining practical activities with opportunities for conversation, the project encouraged people to explore AI in a way that felt relevant to their everyday lives.

One of the most significant outcomes was a shift in audience perceptions of AI. Many visitors arrived with strong concerns or scepticism about the technology but left with a more nuanced understanding of both its opportunities and challenges. As one participant reflected, "not all AI is a devouring large language terror."



Local examples of AI research also proved particularly powerful, helping audiences see how AI is already being used to address real-world problems in their own communities.

The project has created a lasting foundation for future work, with new university partnerships, plans for expanded resources and growing interest from schools and community organisations keen to continue the conversation about AI.

A key strength of the programme was its ability to engage audiences with very different levels of confidence and experience. Activities were designed with multiple ways to participate, including hands-on challenges, visual displays, discussion prompts and facilitated conversations. The team continually adapted the experience in response to visitor feedback, even introducing an AI chatbot demonstration after discovering that many people had never used one before. Participants valued the balanced approach, with one visitor describing the exhibition as "a very engaging, hands-on exhibition that clearly outlined how AI works and how it can be used for public benefit."

> It was wonderful to see the amazing work you are doing. The exhibition was extremely well structured and displayed. Glad to be a part of it.
>
> Dr Abhijit Chatterjee, Academic collaborator

Putting people at the heart of AI at Life Science Centre, Newcastle

At Life Science Centre in Newcastle, families, school groups and community organisations were invited to explore artificial intelligence through experiences designed to feel welcoming, relevant and fun. Rather than presenting AI as a complex technical subject, the team embedded it within a live science show about critical thinking called 'Find the Fake', encouraging audiences to spot errors and clues in AI-generated content.

Alongside this, a special 'Spotlight on AI' day brought together researchers from Newcastle and Northumbria universities to share hands-on demonstrations and conversations about their work.

The event attracted almost 1,600 visitors, making it one of Life's most successful spotlight days to date.

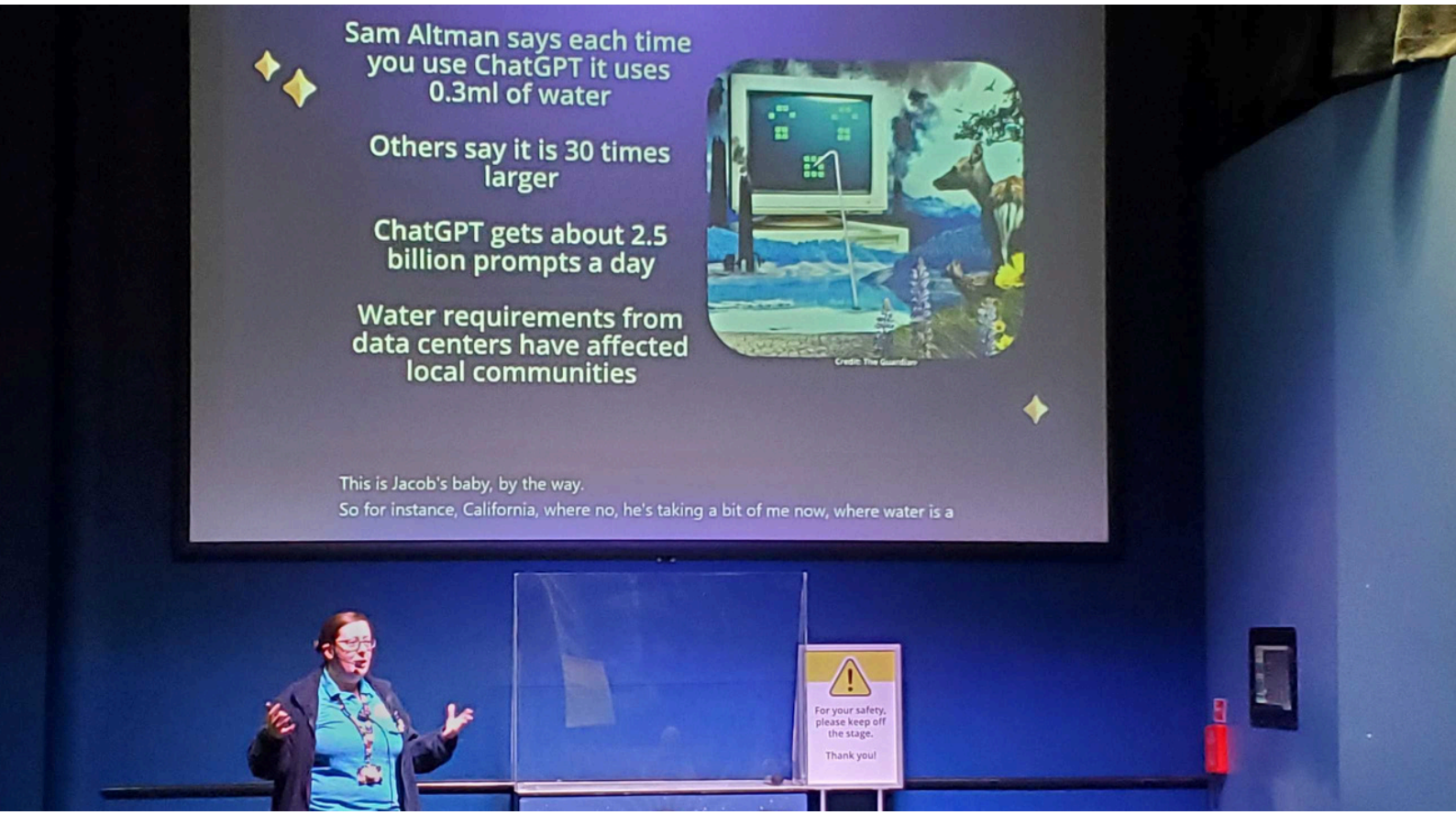
www.sciencecentres.org.uk/projects/demystifying-ai

The programme focused on helping people engage with AI on their own terms. Activities were designed around working examples of AI that families could experiment with together, creating opportunities to ask questions and explore how the technology works.

Researchers worked closely with the Life team to adapt their ideas for family audiences, while activities such as AI-powered story generation and interactive demonstrations encouraged curiosity across different ages. By prioritising conversation over information delivery, the programme created space for visitors to discuss topics such as trust, misinformation and the role of AI in everyday life with experts working directly in the field.

One of the most valuable outcomes was helping participants feel that their views and questions about AI mattered. Feedback from the Spotlight Day suggested that visitors left feeling more able to think critically about AI and contribute their own ideas to discussions about its future. For a technology that many people feel is arriving faster than they can understand or influence, creating a sense of agency was a significant achievement. The success of the programme has already inspired plans for future AI engagement, including the potential development of permanent AI exhibits and an annual programme of events exploring the technologies shaping society.

Exploring the benefits and concerns about AI at the National Space Centre, Leicester



At the National Space Centre, families, school groups and young people were invited to explore how artificial intelligence is transforming our understanding of space. Through an interactive talk delivered both at the centre and in schools and colleges, audiences discovered how AI is being used by space agencies around the world to analyse vast amounts of data, support planetary exploration and advance scientific discovery. Rather than presenting AI as simply good or bad, the programme encouraged participants to weigh its benefits against concerns such as energy use, environmental impact and misinformation, helping them to develop their own informed opinions.

Designed for a wide range of ages and levels of experience, the talks combined clear explanations, practical examples and regular audience participation. Complex concepts such as machine learning and large language models were broken down through diagrams, real-world case studies and discussion.

The team continually refined the content in response to audience feedback, introducing clearer definitions, visual timelines and opportunities to explore both the opportunities and limitations of AI. By connecting AI to exciting space missions from organisations including NASA, ESA and other international space agencies, the programme provided a compelling context for understanding how the technology is already being used to solve real-world challenges.

One of the most powerful outcomes was helping audiences feel more confident in their ability to engage critically with AI. As one young participant reflected after learning how generative AI systems work, “it’s not so scary now that I understand how it works.”

> It was great to hear about all the exciting creative projects.
>
> – Feedback from a visitor hearing how the National Space Centre uses AI

Teachers also highlighted the value of the programme as an extension of classroom learning about AI and online safety. The project has already created a lasting legacy, with demand from schools, colleges and community groups leading to ongoing delivery and continuous development of the talk. Just as importantly, it has equipped National Space Centre staff with the confidence and tools to support conversations about one of the most significant technologies shaping the future of science and society.

Mission AI exploring space, climate and our future at STEM Discovery Centre, Hertfordshire

At STEM Discovery Centre, families, school pupils and community groups stepped into the role of scientists through ‘Mission: AI Space Science’. Using space exploration and climate research as inspiring real-world contexts, participants discovered how artificial intelligence is helping scientists navigate Mars, monitor environmental change and make sense of complex data. Through interactive talks, workshops and hands-on activities, young people explored AI-powered Mars rovers, built and programmed LEGO® robots, modelled planetary systems and investigated how AI supports research on Earth and beyond.

Rather than focusing solely on technology, activities encouraged participants to think critically about how AI is used, who benefits from it and why human oversight remains important. Community partnerships helped ensure sessions reached a broad range of audiences, while iterative testing with home educators allowed activities to be refined and adapted to different learning styles.

Participants connected particularly strongly with examples linked to climate science and sustainability, prompting thoughtful discussions about environmental responsibility and trust in technology.

One of the programme's most significant achievements was helping audiences see AI as a tool that can support scientific discovery and public benefit when used responsibly. As one participant reflected, “the space and climate activities made AI feel real and useful.” Alongside increased confidence and understanding among participants, the project has created a lasting legacy through a permanent AI exhibit expected to reach thousands of visitors each year. The programme has also strengthened staff expertise and established a foundation for future engagement exploring the connections between AI, planetary science and our changing planet.

> ‘Mission to Mars’ helped me understand how AI helps rovers explore space.
>
> - Student

> This programme has given us confidence to talk about AI responsibly.
>
> - STEM Discovery Centre staff member

Unknown dinosaurs help demystify AI at Thinktank, Birmingham

At Thinktank, families explored artificial intelligence through creative, hands-on activities designed to help make complex concepts approachable and fun. Delivered during school holidays and weekends, the programme transformed AI from an abstract digital technology into something visitors could physically interact with. Children and adults drew 'Unknownosauruses' from fossil clues to explore how AI image generators work, built LEGO® models inspired by protein folding, played giant games investigating chatbot guardrails and experimented with AI-powered digital tools.

Alongside these family activities, a special 'Demystifying AI: Thinktank Late' event brought together experts from media, technology and community organisations to discuss the opportunities and challenges AI presents in everyday life.

The programme focused on helping visitors understand how AI learns from data, where it can be useful and where critical thinking remains essential. By combining physical activities with facilitated conversations, the team created opportunities for families to learn together and explore questions about trust, creativity and decision-making.

www.sciencecentres.org.uk/projects/demystifying-ai

The dinosaur drawing activity proved particularly popular, sparking extended discussions about the strengths and limitations of AI-generated images. As one member of staff observed, explaining that AI works from the data it is given helped make the technology “make more sense” to participants. The activities were designed to support a wide range of learning styles and were adapted for different ages, ensuring that visitors could engage at a level that felt comfortable and meaningful.

One of the most significant outcomes was increased confidence—both among visitors and the staff facilitating the activities. Through dedicated training and ongoing support, visitor experience assistants developed the knowledge and confidence to hold nuanced conversations about AI with the public. Visitors responded enthusiastically, with one participant describing the programme simply as “AI – demystified!” Legacies include strengthened partnerships with local organisations and a successful new model for adult-focused events that encourages deeper conversations about the role of AI in society.

> It gave visitors a new awareness of learning that AI can work out complex combinations.
>
> — Visitor Experience Team

> The intimacy of having conversations with the experts was great.
>
> Superb event, learnt so much about AI.
>
> — Thinktank Late participants

Mapping AI through a tactile cityscape at We The Curious, Bristol

At We The Curious, families and young people were invited to discover how artificial intelligence is already woven into the fabric of daily life. Beginning with community sessions delivered alongside local organisations and later expanding into the science centre during the Easter holidays, the programme reached more than 3,500 people.

At its heart was a large interactive textile map of Bristol, where visitors uncovered hidden uses of AI across the city, from healthcare and transport to public services and infrastructure.

Alongside the map, activities such as ‘Is it Cat?’ and ‘Your AI Assistant’ encouraged participants to explore how machine learning systems are trained and how decisions made by humans shape the technologies they use.

> Most people, including young children and regardless of pre-existing opinions of AI, use AI chatbots regularly. Most commonly this is Gemini or ChatGPT.
>
> – LST Staff

The project combined local stories, creative design and hands-on play to make a complex subject feel relevant and approachable. Developed with researchers from the University of Bristol and artist Ramona Eve, the tactile map used lights, textures and oversized interactive pieces to create an experience that appealed to a wide range of ages and learning styles. For many visitors, recognising familiar Bristol locations became a gateway into deeper conversations about technology, trust and public benefit. Community sessions proved particularly valuable in testing and refining activities, helping the team adapt content for young people who might not typically engage with STEM topics through more traditional approaches.

One of the most significant outcomes was helping audiences connect AI to real places, real decisions and real people. Visitors frequently expressed surprise at the range of ways AI is already being used beyond chatbots and online tools. The project also revealed how widespread AI use has become among younger audiences, many of whom were already using generative AI regularly but had little understanding of how it worked. Activities such as 'Is it Cat?' helped bridge that gap, enabling participants to recognise how AI systems learn, where mistakes can occur and why human judgement still matters.

As one member of staff reflected, the experience left some visitors feeling that AI was perhaps "not smart enough to take over the world after all", replacing uncertainty with curiosity and informed discussion.

> I want to build robots that can do laundry
>
> – Participant

Case studies from Northern Ireland

Bringing AI and astronomy to life at Armagh Observatory & Planetarium

At Armagh Observatory & Planetarium, the 'Demystifying AI' programme reached more than 12,000 participants through a large-scale interactive exhibition exploring how AI is used in astronomy and scientific research. Targeting primarily 8–14 year olds, the exhibition combined hands-on iPad activities, interpretive panels and video interviews with astronomers to explain AI through real-world applications such as analysing stellar spectra and identifying asteroid families.

Accessibility and inclusion were embedded throughout, with adjustable exhibit design, subtitled content, clear language and facilitator-led discussions ensuring the experience could engage audiences with different needs, ages and levels of understanding. STEM Ambassadors working in AI-related fields enriched the programme through talks and Q&A sessions that connected young people directly with professionals using AI in their work.

Internal training sessions helped increase staff confidence and strengthen facilitation skills, while the exhibition format allowed teams to adapt discussions in real time to suit different audiences. One staff member reflected: “At the beginning, AI felt quite intimidating to talk about, but over time I became much more confident explaining it to visitors.”

Despite tight development timelines, the project successfully delivered meaningful engagement at scale. Teachers and adults reported increased understanding and confidence around AI alongside the young participants.

The project has created a lasting legacy through a reusable AI exhibition that will continue to form part of the Armagh Planetarium & Observatory’s public engagement programme beyond the funded period. The experience also strengthened internal capability to deliver future AI-focused activities and sparked plans for new full dome content and interactive experiences.

Feedback highlighted the value of combining interactive learning with real-world context, with participants particularly enjoying the creative and competitive elements of the activities.

> The programme has provided valuable insights into how science centres can support public understanding of AI and contribute to broader conversations around emerging technologies.
>
> - Dr Kerem Osman Çubuk, Digital Theatre Producer & Astronomy Communicator, Armagh Observatory & Planetarium

Opening the black box of AI at W5, Belfast

At W5 Science and Discovery Centre, families and school groups were invited to explore artificial intelligence through a dedicated exhibition and interactive live show that unpacked how AI works, where it is used and the choices society faces as the technology evolves. Visitors journeyed through a series of themed zones, exploring everything from machine learning and real-world applications to ethics, environmental impacts and future implications. Alongside the exhibition, a fast-paced live show used games, creative challenges and audience participation to compare human and artificial intelligence, revealing how machines recognise patterns, learn from data and make decisions.

The programme was designed to give audiences the time and space to engage with a complex topic from multiple perspectives. Hands-on activities introduced key concepts in accessible ways, while dedicated discussion and reflection areas encouraged visitors to consider wider questions about trust, responsibility and the role of AI in everyday life. Partnerships with researchers, industry representatives and technology organisations helped ensure the content reflected both current developments and future opportunities. Support for school transport also helped widen access, enabling more young people to take part regardless of location or financial circumstances.

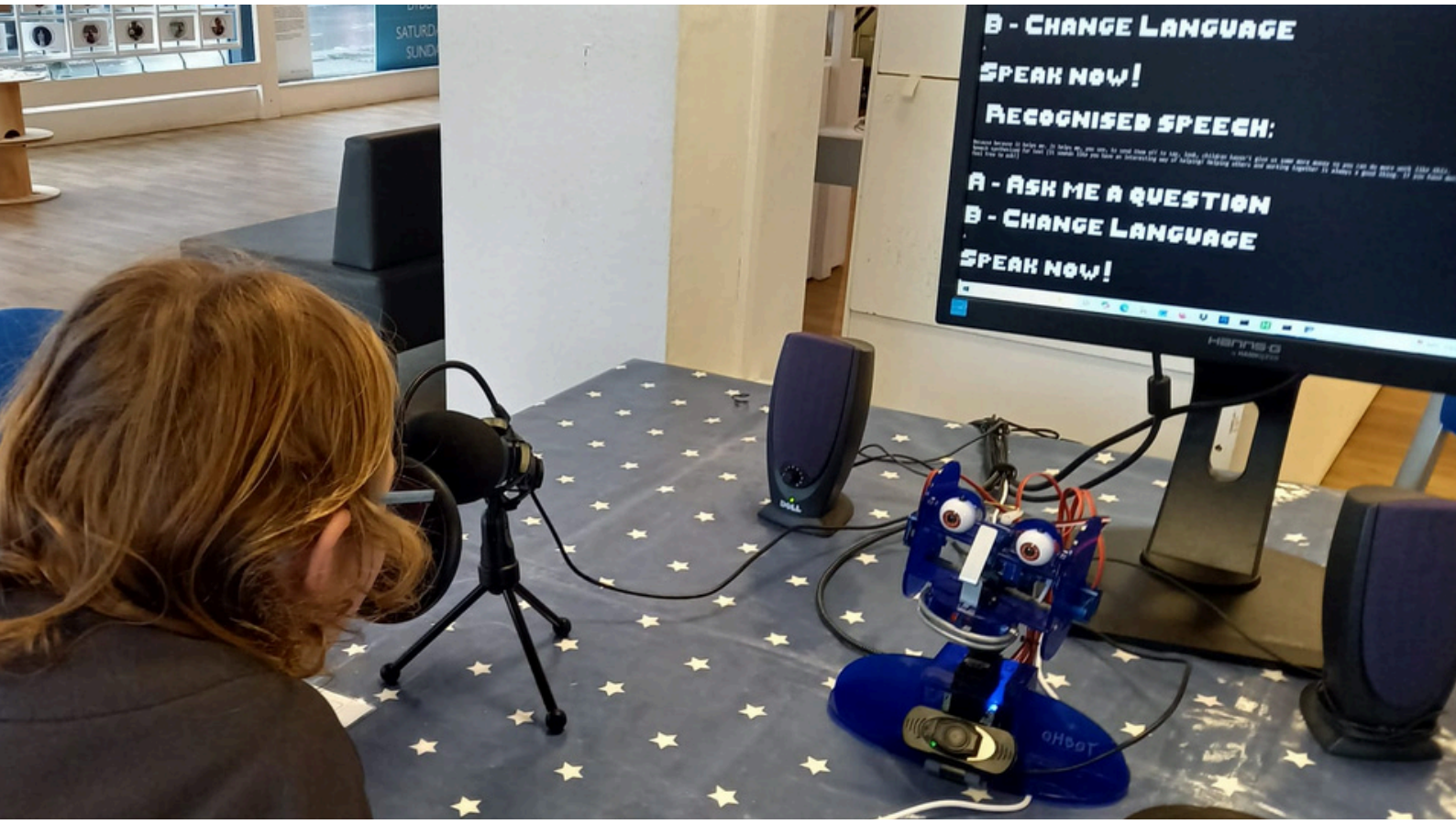
The strongest impact came from helping visitors move beyond seeing AI simply as chatbots and image generators. Through activities such as the ‘Teachable Machines’ exhibit and the live show, participants developed a clearer understanding of the data, patterns and human decisions that sit behind AI systems.

By providing a foundation for informed discussion and critical thinking, the programme equipped audiences with knowledge that will remain relevant as AI continues to shape many aspects of work, education and society.

> “I didn’t realise AI was more than just LLMs.”
>
> — Visitor’s reflection after Demystifying AI event

Case studies from Wales

Discovering AI through play, creativity and Welsh heritage at Oriel Science



At Oriel Science in Swansea, visitors were invited to explore artificial intelligence through a series of interactive exhibits designed to make complex technologies accessible, engaging and relevant to everyday life. Working with researchers and technology partners, the team created hands-on experiences that demonstrated both the opportunities and limitations of AI. Visitors could chat with a bilingual AI-powered version of the infamous Welsh pirate Barti Ddu, collaborate with AI to create artwork, experiment with image and video generation tools, and explore how AI is being used in professional research to verify the authenticity of images and information.

The programme placed interaction and exploration at its heart. Rather than simply explaining AI, the exhibits encouraged visitors to experiment directly with the technology and discover how it responds. As well as the bilingual chatbot, physical controls and tactile interfaces helped make more technical AI tools accessible to a broad range of audiences.

Alongside showcasing AI's capabilities, the exhibits also prompted conversations about important issues including data, bias, creativity and ethics, helping visitors consider both the benefits and challenges of emerging technologies.

One of the most significant outcomes was giving people who had little or no previous experience of AI the opportunity to engage with it in a supportive environment. Through playful, hands-on encounters, visitors gained a better understanding of how AI systems are trained, the importance of data and the ways AI is already influencing society.

The success of the programme has ensured a lasting legacy, with the exhibits remaining part of Oriel Science's offer and continuing to support public conversations about one of the most rapidly evolving technologies of our time.

> At Technocamps we have found the use of the AI chatbot to be a great way of engaging people of all ages to explore AI in a controlled environment. With our Barti Ddu model on display at Oriel Science, thousands more people will be able to interact with the robot through Welsh or English and learn about an infamous Welsh individual in a more engaging way, leaving the venue with a better understanding of the capabilities and limitations of AI models and how they are changing the world around us, for better or worse.
>
> - Luke Clement, Operations Manager of Technocamps

Turning AI into something you can touch, at Techniquest in Cardiff

At Techniquest, families were invited to explore artificial intelligence not through screens, but through hands-on experiences that made invisible technologies tangible. Designed primarily for children aged 7–14 and their families, the programme transformed AI concepts into physical games and challenges that encouraged visitors to think, sort, classify and problem-solve like an AI system. Alongside these interactive activities, visitors discovered how AI is being used by researchers across Wales through a series of biographies showcasing academics from a wide range of disciplines and backgrounds.

The programme focused on helping people understand how AI works, when it can be useful and why critical thinking remains important. By placing visitors in the role of an AI system, activities demonstrated how machines learn from data and make decisions, creating opportunities for families to learn together.

Staff found that the physical nature of the activities sparked rich conversations between generations, with parents often explaining concepts to their children as they worked through the challenges.

One of the most popular activities encouraged visitors to sort animals based on different characteristics, helping children understand the principles of AI training while providing a natural starting point for deeper discussions about technology. TikTok content was useful as a tool for talking to people, even being used by teaching staff at the International School of Stuttgart in Germany as a starting point for their own lessons on AI.

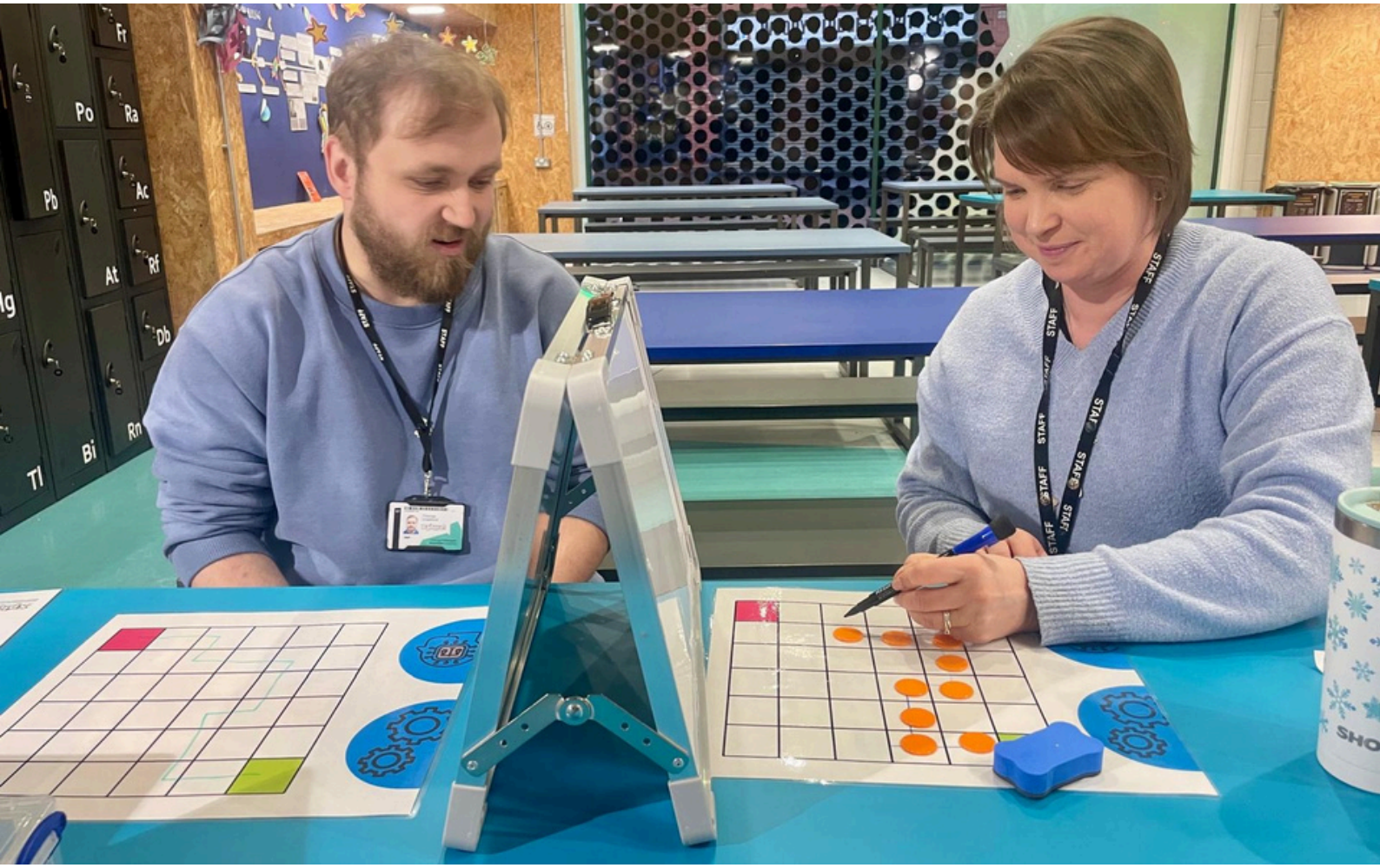
One of the programme's most lasting impacts was building confidence and understanding around a topic that can often feel abstract or intimidating.

The activities encouraged visitors to think critically about responsible AI use, who controls these technologies and how they should be governed in the future. The floor engagement activities will continue to be used and updated to enable Techniquest to keep engaging the public with AI in its most up to date and relevant forms.

The project also strengthened staff confidence and understanding, creating a more nuanced organisational conversation around AI and its wider implications. By turning complex digital processes into engaging physical experiences, Techniquest helped families see AI not as something mysterious happening inside a computer, but as a technology they could question, understand and discuss together.

> The kids really love sorting animals, which makes it really easy to talk to them about AI, as they are 'being AI'.
>
> — Staff

Discovering the AI hidden in everyday life, at Xplore! in Wrexham



At Xplore! Science Discovery Centre in Wrexham, families and young people were encouraged to explore artificial intelligence through a blend of tabletop challenges, outreach sessions and live science shows.

Delivered both at the centre and through partnerships with community groups, the programme introduced AI through familiar situations, helping audiences consider where they encounter the technology in daily life and what it might mean for the future.

By weaving AI themes into popular shows such as ‘Destination Space’ and ‘Superheroes’, the team introduced new ideas through stories and experiences that audiences already knew and enjoyed.

> We saw strong engagement from families who were learning and exploring together, rather than passively receiving information.
>
> - Science communicator

The programme focused on shared discovery, with children and adults working together to solve problems, discuss scenarios and test ideas. Activities were designed to encourage conversation rather than deliver technical explanations, creating opportunities for families to weigh up the opportunities and challenges presented by AI. This approach proved particularly effective with younger audiences, many of whom arrived with limited awareness of how AI is used beyond robots and science fiction. As discussions unfolded, participants began making connections between AI and familiar technologies such as navigation apps, recommendation systems and voice assistants.

Perhaps the most valuable outcome was helping visitors feel comfortable asking questions about a rapidly changing technology. Rather than viewing AI as something distant or difficult to understand, many participants left with a stronger sense that they could engage with the topic, form their own opinions and discuss it with others. Staff observed families learning together and building their understanding through conversation, while outreach delivery extended these opportunities to audiences who may not otherwise have visited a science centre.

The project has left a lasting legacy through a collection of adaptable activities and a growing confidence within the organisation to explore emerging science and technology topics in future programming.

> Embedding AI themes into our live shows helped make a complex topic feel familiar, engaging and relevant for younger audiences. The tabletop activities worked really well for sparking conversations between children and adults about how AI might impact their lives.
>
> - Clair Griffiths, Community Fundraising and Outreach Coordinator, Xplore!