

Next Gen Earth Insights report



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Executive summary

Executive Summary by Hannah Rogers, Senior Programme Manager, Community Diversity, Natural Environment Research Council and Shaaron Leverment, Chief Executive, Association for Science and Discovery Centres

The Natural Environment Research Council, part of UK Research and Innovation (UKRI – NERC) is committed to building a research and innovation (R&I) sector that can support the right environments where diverse talent can thrive, provide opportunities to excite and capture the imaginations of young people about R&I and support young people to engage with science; broadening participation and building trust.

The Next Gen Earth programme, created by the Association for Science and Discovery Centres (ASDC), exemplifies this ambition, demonstrating how targeted investment in skills, education and opportunity can improve access to environmental science research and innovation for the next generation.

Working in partnership with organisations such as ASDC, who share our commitment and our values, ensures that environmental

science engagement is inclusive, accessible and relevant to places across the UK, in order to build trust and create a greater shared sense that environmental science research and innovation can benefit everyone.

Through engaging initiatives and real-world learning experiences, this programme is opening pathways into environmental science careers, particularly focusing on the voices of young people historically underrepresented in environmental sciences who have the potential to be part of the future talent pool, but may currently not have the confidence or opportunity to consider this as an option for their future.

This investment directly delivers against a key strategic objective in the **NERC Diversity and Inclusion Living Action Plan**: to work in partnership with environmental science institutions, to improve the

diversity of visible role models and attract under-represented groups into the sector. Collaborating with The Association for Science and Discovery Centres, this work contributes towards strengthening these partnerships across the research and innovation sector, supporting the recognition of diverse talent, and embeds inclusive practices that enable individuals not only to enter the field but to thrive within it.

Supporting our ambition to establish stronger place-based partnerships, working with the breadth of science and discovery centres, through co-created activities has built trusted relationships and raised the visibility of STEM role models from diverse regions across the UK and backgrounds. By sharing authentic stories, showcasing the skills, experiences and achievements of individuals from under-represented backgrounds, they helped to challenge the perceptions of who belongs in environmental sciences. By sharing

power and allowing the young people to shape engagements and connect with environmental science on their terms, Next Gen Earth is building confidence, broadening horizons and supporting a stronger sense of belonging among those who may previously have felt excluded.

NERC is proud to support this work, which is strengthening the pipeline of talent and demonstrating the impact of an evidence-informed, partnership-led approach. This report highlights not only the breadth of activity delivered, but the outcomes and impacts achieved, contributing towards a more accessible, equitable and diverse future for environmental research and innovation.

Key impacts

9.9%

increase in young people who **strongly agreed** that they could work with environmental science

11.9%

increase in young people agreeing that people like them choose to be environmental scientists and researchers

A substantial

22.7%

increase in young people who **strongly agreed** that they could join in with environmental science activities

14.7%

increase in agreement that environmental science matters in their everyday life



What we heard

Insights from young people on the barriers to environmental science

Despite growing concern about climate change and environmental issues, many young people from historically under-represented backgrounds do not see environmental science as relevant, accessible or open to them. Limited awareness of the sector and a lack of positive and meaningful opportunities to engage with environmental science all contribute to this gap.



“The barriers are becoming apparent, the main one being lack of awareness about what environmental science is and how important it is for action on the challenges posed by the climate and biodiversity emergencies. As understanding improved, many of the young people expressed an interest in and talked about the importance of research.”

- Science and Discovery Centre Practitioner

1 Limited awareness of 'environmental science'

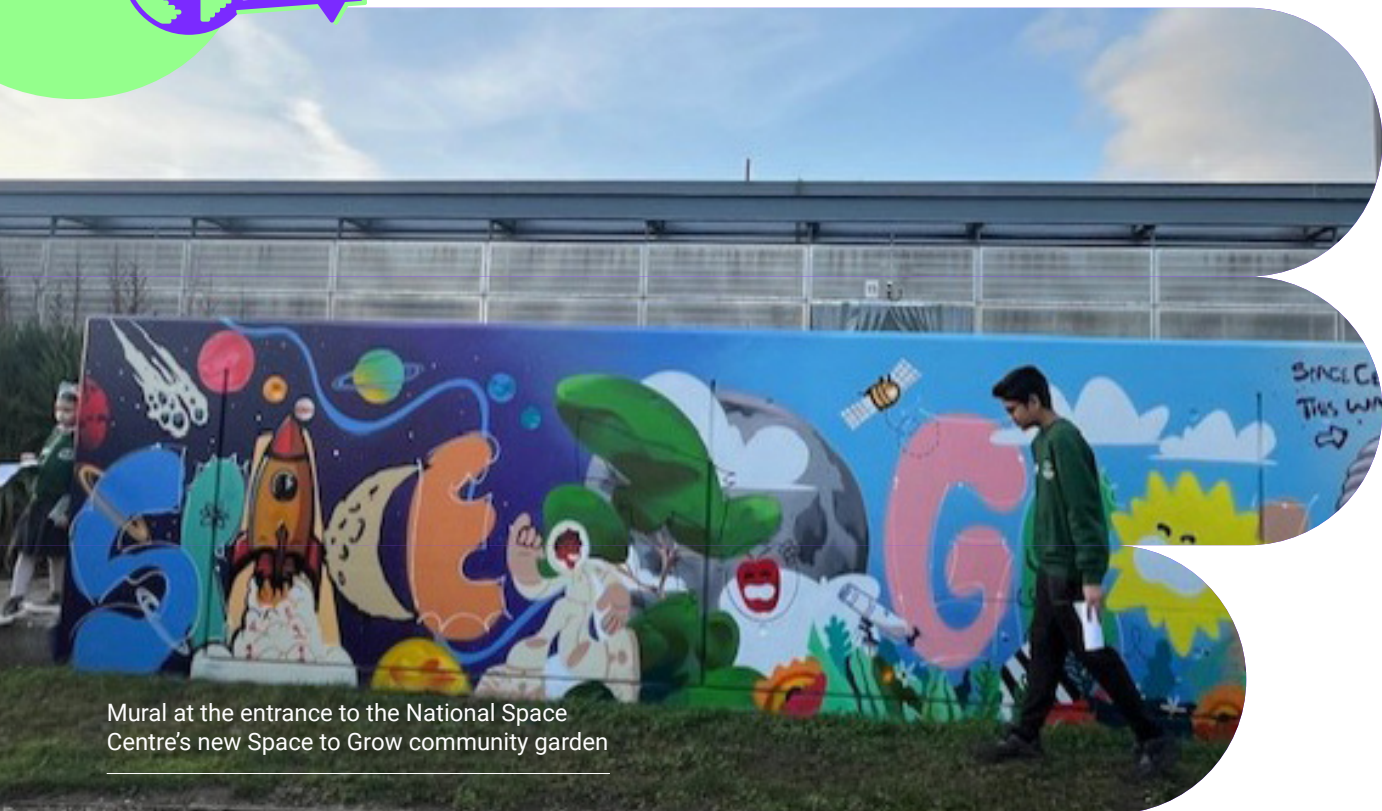
There is low understanding on what environmental science is or the breadth of careers it includes. When asked “What is environmental science?” most participants couldn't answer.

2 Feelings of anxiety and lack of agency

Many participants were already concerned about environmental issues, but without recognising the validity of how young people feel and without opportunities to contribute to solutions, these concerns can leave young people feeling powerless or disconnected.

3 Personal connection to environmental sciences isn't clear

Young people found it difficult to see how their personal interests, skills and identities related to environmental science. This had to be made explicit.



Mural at the entrance to the National Space Centre's new Space to Grow community garden

4 Negative attitudes of science

In many projects, young people did not come from a neutral or indifferent place, but were already rejecting science due to negative experiences that shaped their perceptions and confidence

5 Access to opportunities is low

Participants reported having low access to relevant, inclusive opportunities to engage with environmental science

6 Environmental science is perceived as lower-status career

Some young people shared that environmental science may be less prestigious or less financially rewarding than other choices of career, making them a less attractive option for onward study.

“In practice, this meant working with participants who struggled to see the relevance of science to their own lives and interests, and who may have had prior negative experiences that shaped their perceptions. Engaging these audiences required a high level of care and skill.”

- Dr Helen Featherstone, Project Steering Group, Head of Public Engagement, University of Bath

What works:

Insights from the Next Gen Earth approach

“ For some of the young people we are the first positive experience of science that they have had. ”

- Science and Discovery Centre Practitioner



Across the programme, informal and participatory approaches helped young people engage with environmental science in ways that felt relevant, supportive and achievable. The strongest impacts were seen where activity was locally grounded, relational and co-created.



Participant taking part in Kew Garden's Model COP event

1. Grounding engagement in place and identity

“Environmental science is relevant to the things I like and do everyday.”

- Young participant

By working through regional science and discovery centres, the programme rooted environmental science in the realities, identities and priorities of local communities across England, Scotland and Wales. Young people responded more positively when content felt specific and relevant to their lives, interests and communities, helping strengthen understanding of why environmental science matters in everyday life.

This was enabled by the project emphasis on **co-creation** and promoting **agency**. Young people were not only invited to participate, but to shape questions, influence activities and contribute to outputs.

Language and practice across the projects framed young people as experts in their contexts and experiences. Overall, the young people experienced a positional shift from 'recipients' and 'beneficiaries' of engagement and knowledge, to being the 'experts' and 'contributors' to the

field, with valued expertise that gave them permission to critique, redesign and propose ideas rather than simply respond to questions.

Young people did not just gain knowledge; they began to see themselves as contributors to future environmental solutions, with the confidence to ask questions, share ideas and take action.

“They weren't treated as school children, they were treated as researchers.”

- Science and Discovery Centre Practitioner

“The programme did not simply engage young people in environmental science; it revealed what they are capable of leading.”

- Community partner



14.7%

increase in agreement
that environmental
science matters in their
everyday life

and a greater understanding
of environmental science,
including what it is, why it matters
and the breadth of careers
connected to it

Participants checking
water pollution levels on
a field trip in North Devon

2. Impact starts with relationship



The young people felt “empowered” by sessions on biodiversity and the partners who delivered sessions. Case study example:

“ it gave them that little bit of fire to want to take the action and to know that that action, A, was realistic and practical and they could do it and B, they understood how that was going to make a difference. ”

- Science and Discovery Centre Practitioner



Youth Advocates session at the Oxford University Museum of Natural History

Project staff invested time in building relationships with young people, creating supportive environments for participation and meeting them where they are. This enabled young people to feel more comfortable contributing ideas and engaging with activities.

Participants also developed a stronger sense of belonging in science-related spaces. In one centre, young people who had never visited before returned with friends and family, confidently showing them around and treating the space as somewhere they belonged. This shift matters: feeling welcome in these environments is an important part of imagining a future within them.

Across projects, confidence grew through new opportunities to discuss ideas with practitioners, peers, present

to adult audiences, and ask scientists direct questions about their work and career paths. These experiences helped young people build both communication skills and confidence in their own voice.

Practitioners from science centres could then bring in wider relatable researchers, PhD students and industry professionals to these trusted spaces, building conversations and connections to 'people like me' who were working in the field.

The meaningful relationships built between young people, practitioners, researchers, educators, community partners, environmental organisations and science and discovery centres will last far beyond the project period.

Substantial increases in changes to participant attitudes:

22.7%

increase in participants strongly agreeing that they felt able to contribute ideas and join in with environmental science activities

22.4%

increase in participants strongly agreeing that their ideas were heard



3. Relatable role models to broaden horizons of possible futures

“Once they met young adults just a few years older than them working in climate-related jobs, you could hear them saying, ‘Oh, maybe I could do something like that.’ That possibility just wasn’t visible before.”

- Science and Discovery Centre Practitioner

The Young people responded positively to environmental science role models who felt relatable, particularly those closer to them in age, from similar backgrounds, or from their local area. Exposure to a wider range of scientists, researchers and environmental professionals helped to make a career in environmental science, and possible pathways into the sector, more understandable, relevant and achievable.

Crucially, encounters with relatable early-career professionals, including people with similar backgrounds, accents and lived experiences, challenges assumptions of who belongs in environmental and STEM spaces. For many young people, these moments made future pathways feel possible in a way they had not before.

Broadened understanding of environmental science careers, including careers in environmental policy, law, activism, science communication and journalism

and increased understanding of who can work in environmental science

Including

9.9%

increase in participants agreeing that they themselves could work in environmental science in the future if they wanted to



4. Practical, sensory and hands-on experiences supported agency and wellbeing

“ We need much more work like this happening with young people. The work gave me hope. ”

- Youth Centre leader

At a time when many young people experience eco-anxiety and overwhelm in relation to climate and environmental issues, the projects provided opportunities for action on a manageable and meaningful scale.

Practical, creative and sensory activities increased accessibility and helped young people connect emotionally with environmental science while building confidence through their own actions and achievements.

To support agency, ownership and pride for participants, many science and discovery centres made it explicitly clear that the young people's views would shape future activity and demonstrated that their ideas had been acted upon. Where organisations made this clear, participants were more likely to feel that their contributions mattered.



Youth Voice participant building the Space to Grow community garden

Projects were often designed to have an end-result to showcase skills and knowledge learnt with wider families, peers and researchers. Whether showcasing 'activism' or opening a community space-themed garden, the young people were able to contribute positively in a practical and tangible way, rather than feeling helpless in the face of large-scale, global challenges.

Young people did not just gain knowledge; they began to see themselves as contributors to future environmental solutions, with the confidence to ask questions, share ideas and take action.

“ it gave them that little bit of fire to want to take the action and to know that that action, A, was realistic and practical and they could do it and B, they understood how that was going to make a difference. ”

- Science and Discovery Centre Practitioner

Increased participation and engagement in environmental science activities with a

22.7%

in participants agreeing they felt able to join in with environmental science activities

17.4%

increase in participants feeling comfortable when doing environmental science activities

Plus Development of experimental and scientific enquiry skills



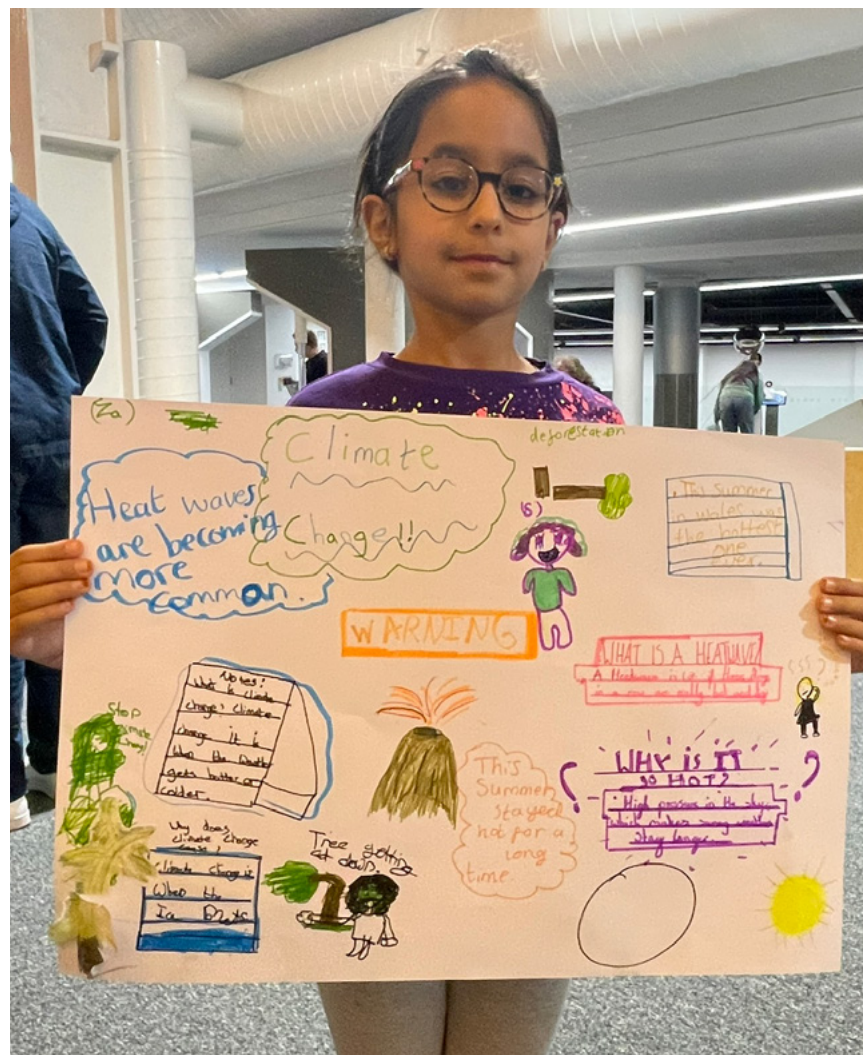
5. Broadening perceptions of 'what counts' as environmental science skills

“ Project staff also made some observations around the difficulties the young people had in making connections between the opportunities open to them in environmental sciences and the skills they themselves had and their personal interests. ”

- Next Gen Earth Evaluation Report

The programme helped young people recognise that environmental science careers require a wide range of transferable skills, not only scientific expertise. As their understanding of environmental science widened, so too did their awareness of where their own interests and strengths could fit within future pathways.

The programme helped young people recognise that environmental science draws on a wide range of transferable and creative skills that they already held, not only laboratory work or advanced technical knowledge. This broadened perceptions of what environmental science involves and helped participants connect their own strengths and interests to possible future pathways.



Participant sharing their poster at Techniquet's COP30 celebration event



Over

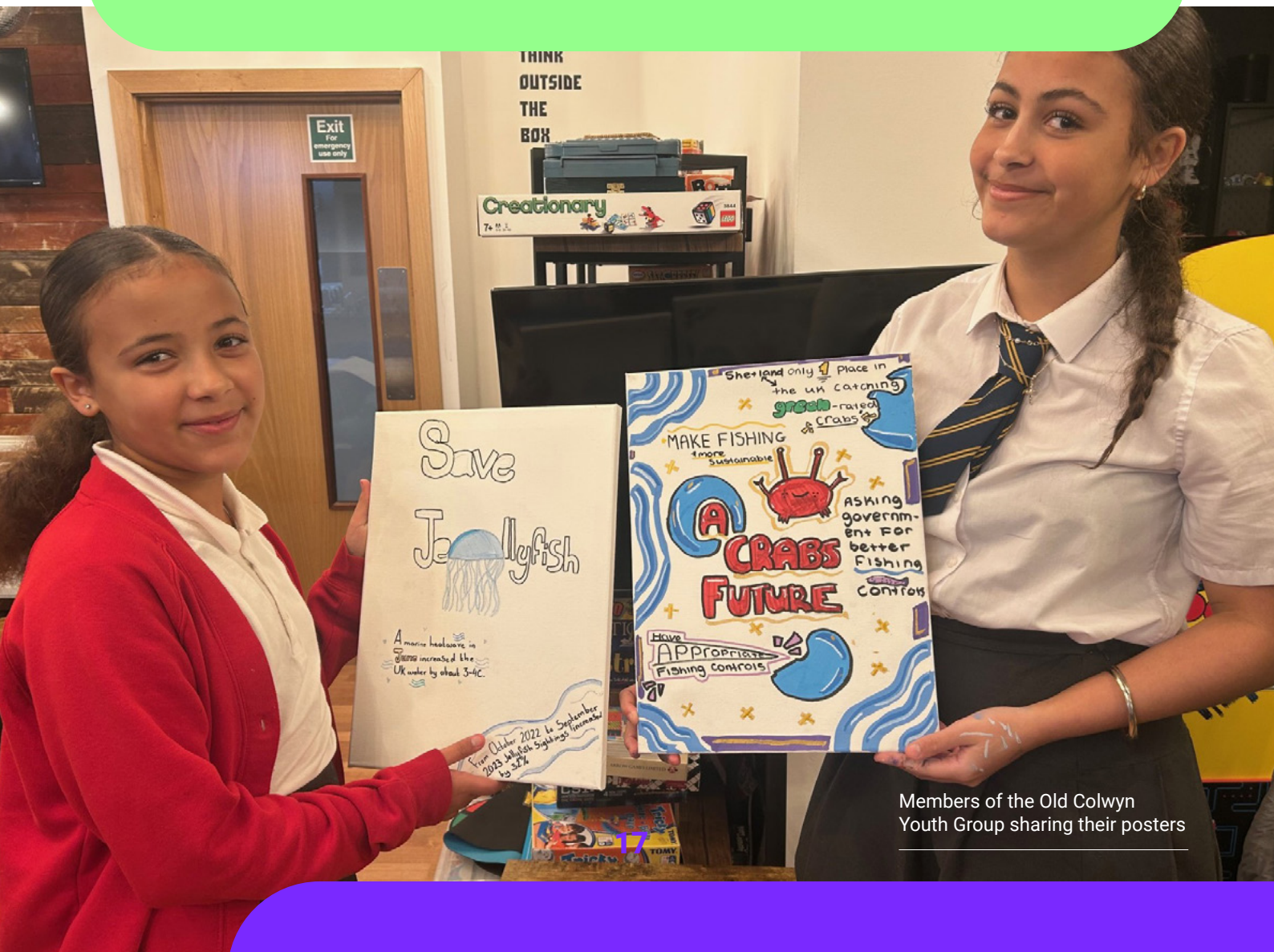
20%

increase in the number of skills identified by participants as relevant to environmental science careers, including creativity, managing people, technical skills and managing resources and money

Plus

Developing confidence and a broad range of skills including communication, teamwork, problem solving, experimental skills and scientific enquiry

and increased recognition of the breadth and interdisciplinary nature of environmental careers



Members of the Old Colwyn Youth Group sharing their posters

Conclusion

Young people face a number of barriers to participation in environmental science. These are not primarily about young people's interest or potential, but it requires confidence building, addressing perceptions, creating personal relevance and improving equitable access to opportunities.

With modest investment from NERC, partnering with trusted, dedicated, community-based organisations across the science and discovery centre sector, Nex Gen Earth has shown how to overcome those barriers.

The evidence from these projects demonstrates that effective engagement is built through approaches that are relational, place-based and youth-centred. Spending time to build trusted relationships and co-creating activities that embed place-based and identity-based relevance and representation at every stage, allowing young people to have practical and hands-on experiences, and broadening perceptions of what counts as environmental science all help young people to see that they belong in the field.

Young people from diverse regions and backgrounds care deeply about environmental science and issues. When environmental science is made relevant to their lives, fully resourced, and delivered through trusted support, they are not only keen to engage, but keen to contribute, to lead and to take action.

Next Gen Earth offers a scalable and transferable model to strengthen public trust, build positive attitudes and promote the relevance of environmental science for the benefit of young people, their local communities and the wider public.

Delivering against UKRI's strategic pillar of improving lives, Next Gen Earth increased recognition and awareness of locally relevant environmental science research and innovation and opened up new pathways and opportunities for the young people involved.

It demonstrated that with inclusive, well-supported engagement, environmental science can be accessible to young people of every background, without leaving anyone behind.

About Next Gen Earth

The Next Gen Earth programme was created by the Association for Science and Discovery Centres (ASDC), in partnership with the Natural Environment Research Council (NERC), delivered in nine regions across the UK by the following partners:

- Centre for Alternative Technology, Reaching Wider and Ysgol y Moelwyn schools
- Dynamic Earth and Multi-Cultural Family Base (Edinburgh)
- Exeter Science Centre and SPACE Youth Services (Bideford and Barnstaple)
- National Space Centre and Youth Voice group (7-14yr olds recruited from the local area)
- Oxford University Museum of Natural History and the Museum's Youth Forum
- Royal Botanic Gardens Kew and Kew Youth Council
- Techniquet, ACE Cardiff, Home Education Wales and Wales Youth Parliament
- The Eden Project and Young People Cornwall
- Xplore! Science Discovery Centre, Methodist Church Group and Old Colwyn Youth Group

Next Gen Earth brought together a diverse group of organisations, their local communities and scientists and researchers from across the UK to explore equitable approaches to engaging young people with environmental science. Through a shared commitment to inclusion, co-creation and NERC science and

innovation, partners worked with young people in their communities to design and deliver experiences that connect scientific research to real lives, places and possible futures.

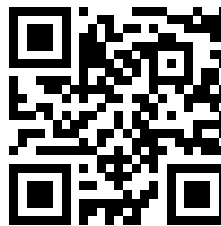
Across the nine projects the average cohort size was 15 individuals ranging from 7-18 yrs old (with one project

engaging with 16 - 25 yr olds) with an overall reach of 570 individual participants from the cohorts and the events they produced. The key focus was to engage with young people historically underrepresented in environmental sciences. From coastal communities to city-based youth groups, from discovery centres to outdoor environments, each project has responded to the needs, interests and contexts of the young people involved.

Across the projects, a consistent themes emerged: meaningful relationships are the foundation for engagement. When young people are engaged on their own terms, given genuine agency, supported by relatable role models, and offered creative, hands-on experiences, they develop greater confidence, a stronger sense of belonging, and their aspirations and ambitions in environmental science can grow.

To find out more about the projects the youth groups decided to run in nine different regions of the UK, please see accompanying **case study report**.

The full external evaluation report can be found [here](#)



Next Gen Earth Partners Map

