



ANNUAL IMPACT REPORT

2023/24



WELCOME

This past year has been a period of incredible growth for SmartSTEMs. We’ve reached more young people than ever, expanding our footprint from Shetland to Cumbria and deepening our partnerships with organisations committed to making STEM accessible to all. Each new location, event, and partnership reflects our drive to ensure that every young person, regardless of background, has the chance to engage with the opportunities STEM has to offer.

While we’re proud of what we’ve achieved, there is still work to be done to close the equity gap in STEM. Too many young people are still held back by limited access and a lack of role models. This challenge is what keeps us moving forward with a commitment to provide practical opportunities and real connections to STEM paths that open doors for all.

As we look to the future, our sights are set on expanding this impact even further. We’re planning new initiatives, connecting with more communities, and working harder than ever to make a lasting difference. I am grateful to our dedicated team, volunteers, and supporters who make this work possible, and I look forward to what we’ll accomplish together in the coming year.



Stuart Macdonald
Founder and CEO, SmartSTEMs



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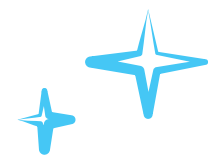
EXECUTIVE SUMMARY

Our annual impact report highlights the significant progress we've made in empowering the next generation with Science, Technology, Engineering, and Maths (STEM) education.

This year, we hosted a record-breaking 121 events, reaching an impressive 14,709 pupils across 567 schools. This included expanding our reach to new areas like Lincolnshire, Orkney, Shetland, and Moray, ensuring a wider range of young people have access to inspiring STEM experiences.

Our events, held in collaboration with industry leaders and educational institutions, provide a unique platform for pupils to connect with inspiring role models and participate in engaging workshops. These experiences generate a deeper understanding of STEM careers and the exciting possibilities they offer.

We are incredibly grateful to our partners and supporters for making this impact possible. Together, we are building a brighter future where all young people have the tools and inspiration to thrive in a STEM-driven world.



ABOUT SMARTSTEMS

VISION

SmartSTEMs’ vision is that young person, regardless of age, gender, background, ethnicity, religion, location, will have equal and fair access to STEM education and career opportunities.

MISSION

Our mission is to provide equal access to inspire and realise the full potential of future generations, through facilitating cost-effective collaboration with industry and education.



WHY?

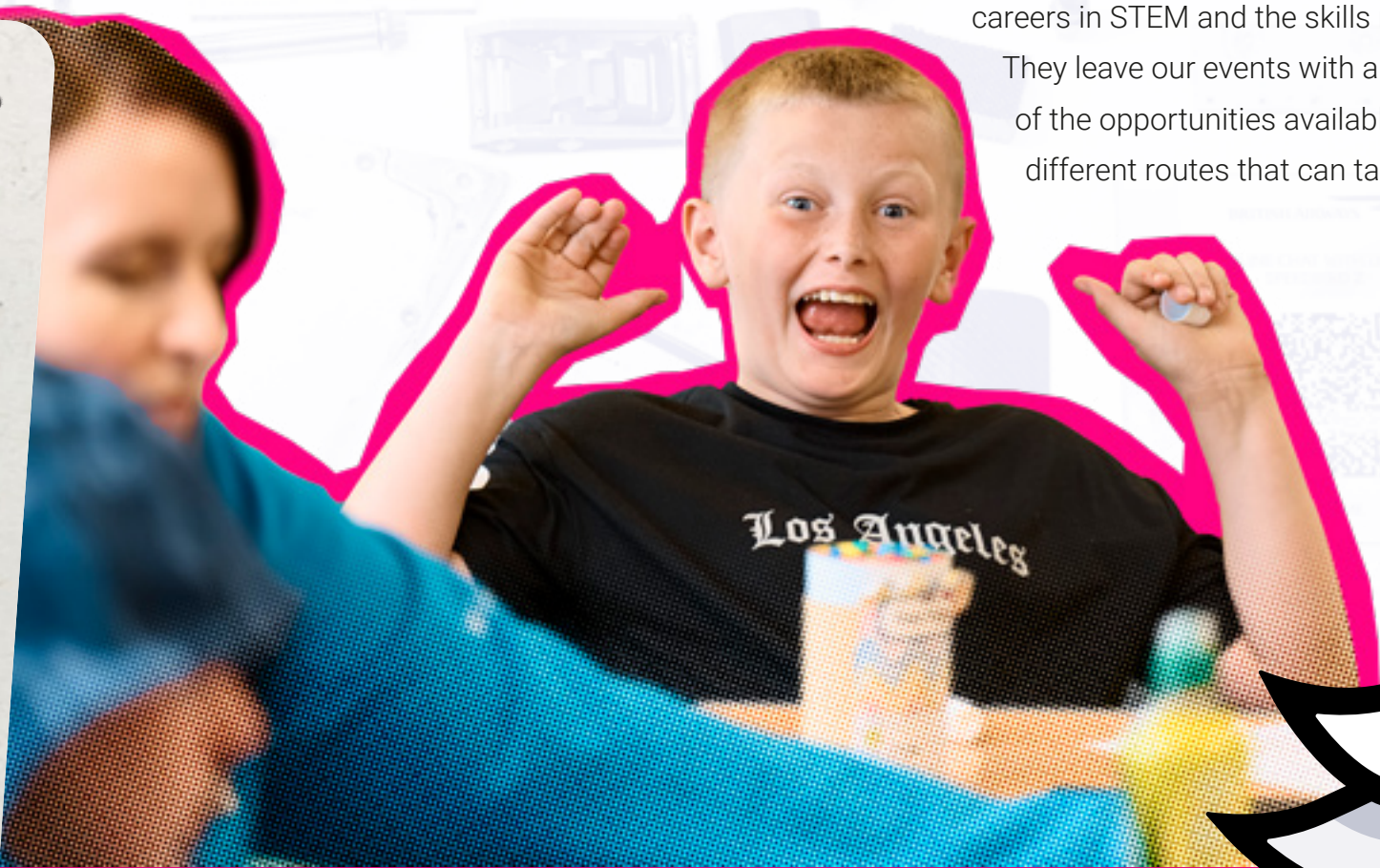
Evidence tells us that if young people have a better understanding of what can be achieved and how, then unsurprisingly they will go on to achieve more themselves. Unfortunately, not everyone has access to people who have a story to tell or indeed someone willing to tell it. SmartSTEMs can fill this gap, ensuring everyone, no matter their background or location has access to inspiring role models.

HOW?

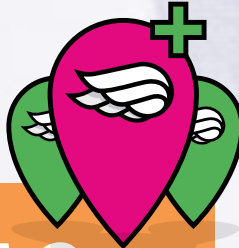
Our expertise lies in organising and hosting events with the aim of inspiring and engaging young people with the range of careers in the four STEM pillars. Our events bring together industry, further education establishments and schools under one roof. Young people attending our events have access to interesting and motivational role models whom they can talk to as well as a range of hands-on workshops which highlight the range of careers in STEM and the skills needed in the industry. They leave our events with a wider understanding of the opportunities available to them and the different routes that can take them there.

OBJECTIVES

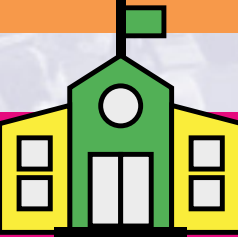
- ALL YOUNG PEOPLE HAVE EQUAL ACCESS TO A QUALITY STEM EDUCATION.
- MORE YOUNG PEOPLE CHOOSE STEM SUBJECTS AT SECONDARY LEVEL.
- MORE STUDENTS ENTER TERTIARY EDUCATION TO STUDY STEM SUBJECTS.
- INCREASED OPPORTUNITIES FOR YOUNG PEOPLE TO PURSUE A PATHWAY INTO A STEM CAREER.
- GREATER COLLABORATION BETWEEN EDUCATION / TERTIARY EDUCATION AND BUSINESS.



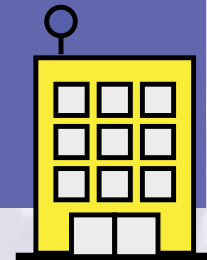
KEY STATS 2023/24



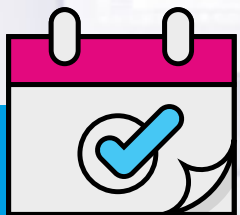
NEW AREAS:
LINCOLNSHIRE, ORKNEY,
SHETLAND, MORAY



**567
SCHOOLS**



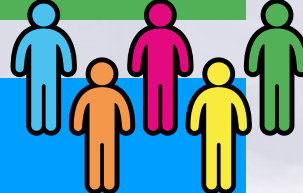
NEW VENUES:
UHI SHETLAND,
UNIVERSITY OF CUMBRIA,
UHI MORAY,
UNIVERSITY
OF GLASGOW



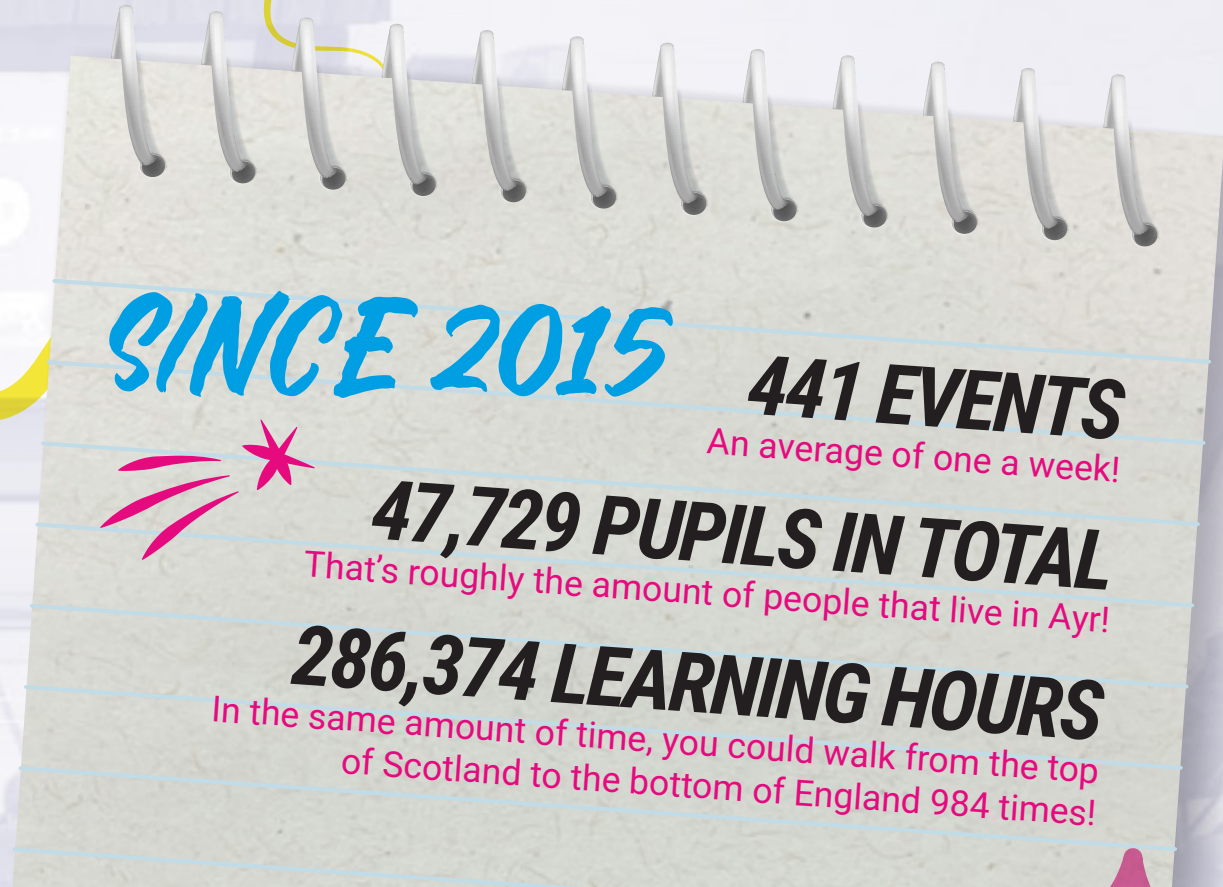
**121
EVENTS**
HUB: 16
SCHOOL: 87
OTHER: 18



**88,254
LEARNING
HOURS**



**14,709
PUPILS**



SINCE 2015

441 EVENTS
An average of one a week!

47,729 PUPILS IN TOTAL
That's roughly the amount of people that live in Ayr!

286,374 LEARNING HOURS
In the same amount of time, you could walk from the top of Scotland to the bottom of England 984 times!

NEW PARTNERSHIPS









EVENT HIGHLIGHTS



Our reach across Scotland spans from bustling city centres to the heart of rural communities, connecting young people in places like Glasgow, Edinburgh, and Inverness, right through to Orkney, Shetland, and beyond. This broad footprint allows us to inspire and support a diverse range of young people, ensuring that STEM opportunities are accessible no matter where they live.

**110
EVENTS**

- Glasgow
- Edinburgh
- Ayr
- Motherwell
- Hamilton
- Stirling
- Paisley
- Renfrewshire
- Dumfries
- Moray
- Orkney
- Shetland
- Inverness
- Crieff
- Greenock



**11
EVENTS**

- Cumbria
- Lincolnshire
- Northumberland



Our impact across England is increasing, with young people from a wide range of communities gaining valuable opportunities to explore and engage with STEM. From vibrant cities to smaller towns, we're creating pathways that empower the next generation to unlock their potential and inspire a future filled with innovation and possibility.

MILESTONES

AUGUST

ANASTASIA AND JEN JOINED THE TEAM

Welcomed two new team members, Anastasia and Jen, to strengthen our mission.



SEPTEMBER

INSPIRE AT BARRHEAD FOUNDRY WITH 920

Partnered with 920 for an impactful Inspire event at Barrhead Foundry.

OCTOBER

GLASGOW WARRIORS X SPEN

Launched our first collaborative event with Glasgow Warriors and SPEN.

NOVEMBER

CYBER AWARDS AND FIRST MORAY EVENT

Celebrated Champion of Champions at Cyber Awards; held our first event in Moray.

DECEMBER

UNIVERSITY OF GLASGOW AND INVERNESS EVENTS

Held inaugural events with University of Glasgow and in Inverness.



JANUARY

NEW TEAM MEMBER: HEATHER

Welcomed Heather, bringing fresh energy to our growing team.

FEBRUARY

MARIA JOINS

Partnered with Connected Places Catapult; welcomed Maria to the team.

APRIL

NEW TEAM MEMBER: JENNY

Added Jenny to our team, continuing to build our capacity and expertise.

MARCH

TELEFONICA TECH AND CEED

Expanded collaboration Ceed and joined forces with Telefonica Tech.

MAY

COMPUTACENTER AND FIRST SHETLAND EVENT

Partnered with Computacenter and launched our first event in Shetland.

JUNE

EVENTS IN ORKNEY AND CUMBRIA

Expanded our reach with events in two new locations: Orkney and Cumbria.

CASE STUDY

PUPIL IMPACT: DERVLA



DERVLA'S STORY: A NEW PATHWAY DISCOVERED WITH SMARTSTEMS

Dervla's journey highlights the transformative potential of SmartSTEMs events in helping young people re-imagine their future. Before attending the SmartSTEMs Inspire event with Nine Twenty Engineering in September 2019, Dervla was focused on a career in the arts, spending hours each week immersed in drawing and dreaming of becoming an animator or illustrator. However, that single event sparked a newfound interest in STEM that reshaped her academic and career ambitions.

Inspired by Connections The turning point for Dervla came through engaging with industry professionals, including a recent J.P. Morgan graduate who shared an enthusiastic vision of technology's impact and the range of career paths within it. Another pivotal moment was hearing Gillian Docherty OBE speak about data science's role in space exploration, broadening Dervla's understanding of the vast possibilities in STEM.

"I REMEMBER GAINING A BRAND-NEW INSIGHT INTO THE WORLD OF STEM. IT GAVE ME THE CHANCE TO MEET A RANGE OF STEM PROFESSIONALS AND LEARN ABOUT THE VARIED CAREERS THEY PURSUE. UNTIL THEN, I HADN'T FULLY REALISED JUST HOW EXCITING A STEM CAREER COULD BE, WHICH LED ME TO CONSIDER FOLLOWING THAT PATH."



An Evolving Passion with Ambitious Goals Since then, Dervla's interest has grown into a love of computer science, especially AI and algorithm design. She has attended a Computer Science accelerator course at the University of Cambridge, where she developed a predictive model to help educators gauge student emotions from writing samples. Additionally, she received the Hopper Award from dressCODE last year. Dervla's involvement with SmartSTEMs has not only introduced her to a new field but also influenced her choice of subjects for her National 5s, with a focus on computing science, space, and data science as potential career routes. Predicted to achieve top grades in Maths, Physics, Chemistry, Computing Science, Biology, English, Psychology, and PE, she plans to advance to Higher courses in Maths, Physics, Chemistry, Computing Science, and English.



"I HOPE TO ATTEND AN OXBRIDGE UNIVERSITY AFTER SCHOOL TO PURSUE A DEGREE IN COMPUTER SCIENCE. I'D LIKE TO FOLLOW THIS WITH POSTGRADUATE STUDY, AIMING FOR A CAREER IN ACADEMIA. I'M EXCITED BY THE FUTURE OF COMPUTER SCIENCE AND BELIEVE IT HOLDS MANY EXCITING OPPORTUNITIES."

A LASTING IMPACT: INSPIRING OTHERS

Dervla's story demonstrates how SmartSTEMs can ignite new passions. Her shift in focus, coupled with her achievements since, underscores the impact of these events in shaping future aspirations for young people across Scotland.

Dervla is a clear example of how SmartSTEMs events can turn a student's direction. Before the SmartSTEMs Inspire event with Nine Twenty Engineering in September 2019, Dervla was set on a more artistic path. She was determined to be an animator or an illustrator, spending hours every week drawing and sketching. But the event sparked a passion for STEM that totally changed her academic and career goals.

CASE STUDY

SSEN SUBSEA



POWERING FUTURES: SSEN SUBSEA AND SMARTSTEMS PARTNERSHIP IMPACT

Scottish and Southern Electricity Networks Subsea (SSEN) joined forces with SmartSTEMs to ignite a passion for Science, Technology, Engineering, and Mathematics (STEM) in remote and rural communities across the Scottish Highlands and Islands. Through events in Inverness, Shetland, and Orkney during 2023-24, this partnership has brought STEM education to the heart of these communities, inspiring future innovators and building closer ties between industry, education, and local residents.

Interactive workshops, engaging speakers, and hands-on activities made STEM come alive for hundreds of pupils. SSEN volunteers, passionate advocates of the energy sector, guided young participants through STEM topics, sharing real insights from their own careers and projects. This direct engagement didn't just teach pupils about STEM—it sparked genuine curiosity and ambition.

The impact of this partnership extended well beyond the classroom. By providing goodie bags filled with practical tools and career information, SSEN offered students a tangible reminder of STEM's possibilities and strengthened the bond with local families. These efforts help to create a sense of belonging and showed that industry is invested in the future of these communities.



The events have left a lasting impact. Over 600 pupils from 18 schools engaged in over 2,600 hours of STEM learning, discovering how STEM careers can shape real-world solutions and inspire critical thinking. Beyond the immediate event, SSEN's presence showcased a range of exciting STEM careers, bridging the gap between education and local employment opportunities. This connection has encouraged pupils to consider STEM pathways, enriching the relationship between SSEN and the island communities and building mutual trust and support.

LOOKING AHEAD

A Pathway to a Brighter Future The partnership between SSEN Subsea and SmartSTEMs has left an indelible mark on Scotland's Highlands and Islands. By inspiring young minds, promoting STEM learning, and strengthening community connections, SSEN and SmartSTEMs have set the stage for a future where innovation thrives, paving the way for long-term community growth and prosperity.

CASE STUDY

DIGITAL DAIRY CHAIN

INNOVATING DAIRY: SMARTSTEMS AND DIGITAL DAIRY CHAIN INSPIRING FUTURE CAREERS

The dairy industry is transforming, driven by cutting-edge AgriTech, digital advancements, and modern processing techniques. Despite these exciting developments, misconceptions about traditional dairy farming still persist, making it challenging to attract young people to explore opportunities within this evolving sector. To tackle this, SmartSTEMs has joined forces with the Digital Dairy Chain (DDC) to show pupils the incredible potential of STEM careers in dairy and technology.

Through a series of engaging, hands-on events, we've brought the future of high-tech dairy farming to life for students across Cumbria and Southwest Scotland. From visiting dairy farms equipped with robotic milking systems to exploring the science of cheese production, students have been immersed in the fascinating intersection of dairy and STEM. Interactive workshops showcase everything from the mechanics of automated machinery to the technology driving sustainability in modern agriculture.

Our collaboration doesn't stop there. By hosting career talks and fairs, we've connected pupils with professionals across the industry.

These events not only highlight diverse career paths but also challenge outdated ideas about what a career in dairy can be. University campus events have further bridged the gap between school and higher education, inspiring students to consider research and innovation as part of their future.

This initiative wouldn't be possible without the incredible network of partners we've built. Educational institutions, dairy processors, tech companies, and industry associations have come together to make these experiences meaningful and impactful. Their input ensures pupils see the real-world relevance of what they're learning, and their support has helped over 8,000 students engage with STEM-focused dairy activities to date.

MAKING WAVES!

Pupils are discovering exciting careers, schools are gaining resources to bring STEM into classrooms, and the dairy sector is connecting with its future workforce.

The "Think Dairy" UK Dairy Careers Expo

WELCOMES OVER 400 SECONDARY PUPILS

and industry collaboration contributes

MORE THAN 300 VOLUNTEER DAYS



LOOKING AHEAD

SmartSTEMs and DDC plan to expand even further, taking their mission to agricultural shows and developing new resources to inspire young minds. Together, we're shaping a brighter, more innovative future for dairy and STEM.

CASE STUDY

CONNECTED PLACES CATAPULT

SMARTSTEMS TAKES OFF: INSPIRING THE NEXT GENERATION OF AVIATION PROFESSIONALS



The aviation industry in Scotland is on the brink of transformation, and SmartSTEMs, in collaboration with Connected Places Catapult, is leading the charge to inspire young people to explore careers in this dynamic sector.

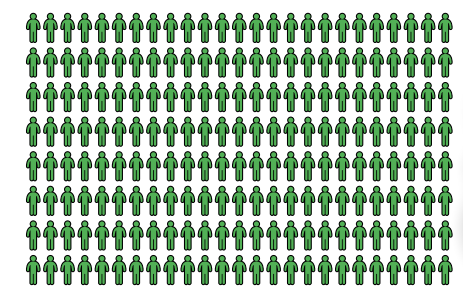
The Connected Airports: Glasgow Future Skills project introduced students to the diverse opportunities within aviation through interactive events, industry engagement, and custom-designed educational resources.

At the heart of the initiative were events hosted at Glasgow Kelvin College and Ayrshire College, engaging over 200 students ranging from S5-S6 pupils to foundation apprentices and college learners. These events showcased the exciting career paths in aviation, offering students the chance to hear directly from industry professionals.

To extend its reach, SmartSTEMs also developed two Scotland-specific lesson plans – one tailored for primary schools and another for secondary students. These resources are designed to create curiosity and a passion for STEM through the lens of aviation, laying the groundwork for future exploration of the sector.

The “Navigating Innovation: Balancing Creativity and Compliance” challenge was designed to mirror real-world problem-solving in aviation. The activity encouraged students to navigate the complexities of creativity within regulatory frameworks while emphasising ethical decision-making. This hands-on experience left students with a deeper understanding of the challenges and opportunities within the industry.

OVER 200 STUDENTS GAINED A FRESH PERSPECTIVE ON AVIATION CAREERS



The impact of this initiative has been significant. Through direct interaction with professionals from ten leading aviation companies, students explored pathways such as modern and graduate apprenticeships, entry-level roles, and emerging technologies shaping the future of the industry.

The project also laid the foundation for future collaboration. Ayrshire College plans to reprise the event in January 2025, while Glasgow Kelvin College is exploring partnerships with West College to expand aviation-related programming. Connections with major organisations such as British Airways, Loganair, and Spirit Aerosystems promise exciting opportunities for future events.

Supported by Connected Places Catapult, the project brought students from schools across Glasgow, East Renfrewshire, East Dunbartonshire, South Ayrshire, and North Ayrshire into the fold, ensuring wide-ranging access to these transformative experiences.

LOOKING AHEAD

For SmartSTEMs, this is just the beginning. The success of the initiative underscores its commitment to connecting young people with inspiring STEM careers. By creating lasting partnerships and enriching educational resources, SmartSTEMs is paving the way for Scotland’s future aviation experts.

CASE STUDY

GLASGOW CITY COUNCIL

SmartSTEMs, in partnership with Glasgow City Council (GCC) and Glasgow Life, embarked on a mission to tackle the digital divide and build a passion for STEM among Glasgow's young people. Aligned with the Glasgow Economic Strategy, the project focused on equipping primary school pupils with essential digital skills while creating an enthusiasm for technology and innovation.

Working alongside GCC's Education and Digital Economy teams, SmartSTEMs delivered a series of engaging workshops to 24 primary schools across the city. These sessions integrated practical digital skills into Scotland's Curriculum for Excellence, making learning engaging, relevant, and accessible.

Central to the project's success was the involvement of 18 inspiring STEM professionals who volunteered to share their journeys and expertise. Their stories brought STEM careers to life, motivating students to explore the possibilities that technology offers. To ensure long-term impact, 108 teachers received training and resources to help embed digital skills activities into their classrooms.

The workshops themselves were as diverse as they were engaging. Pupils learned to code through "Programming Profiles," where abstract art met computer programming. They explored data with "GIFs and Graphs," unlocked the world of cybersecurity in "Code Breakers and Code Makers," and delved into emerging technologies like app development. Across these workshops, 2,797 pupils gained hands-on experience, building their confidence and capabilities in digital skills.

Feedback was overwhelmingly positive. Nearly all students (96%) found the workshops enjoyable and valuable, while teachers noted a boost in confidence, with 74% feeling better equipped to teach digital skills.

The initiative also included a pilot program at Ibrox Library aimed at re-engaging eight young people who had become disconnected from their education. Through tailored workshops, participants discovered STEM's relevance, explored future career paths, and gained transferable skills, with many reporting improved attitudes toward learning and their future.

"THE WORKSHOPS WERE A GREAT WAY TO INTRODUCE DIGITAL SKILLS TO MY STUDENTS. THEY WERE ENGAGING AND RELEVANT TO THE CURRICULUM."



LOOKING AHEAD

This project's success has laid the foundation for further growth. SmartSTEMs plans to expand into secondary schools, enhance library partnerships, and develop a Loan Pool and online resources, ensuring every young person in Glasgow has the tools and inspiration to thrive in a digital world.

OUR SUPPORTERS



Edina Trust

CATAPULT
Connected Places

cruden

DIGITALDAIRYCHAIN

NCL
NEW COLLEGE
LANARKSHIRE

The JOHN MATHER TRUST

DIODES

ISACA

J.P.Morgan

WEST COLLEGE
SCOTLAND

University of
CUMBRIA

Glasgow City Council

benevity

Telefónica Tech

ScottishPower

KVA

SP Energy Networks

MORRISON'S ACADEMY

Turnkey

STRATH UNION
EST.1964

University of Glasgow

HFI

Renfrewshire Council

SCOTLANDIS

ASTRAK

COMMSWORLD

GEMINOA

Computacenter

Scottish & Southern Electricity Networks

THALES
Building a future we can all trust

HOWDEN

iomart

TRUSTEES

**STUART
MACDONALD**

Founder and CEO, SmartSTEMs

I am passionate about young people, their education and the need to bring equity to the opportunities they are afforded. I founded SmartSTEMs to directly address these issues and in so doing have tried to build a low-cost high-efficacy means of bringing together the full education system and industry. This is to put us societally at the risk of leaving less people behind through some accident of birth.



**KAREN
STEWART**

Managing Director, NineTwenty

As a leader in the recruitment industry supporting the Manufacturing & Engineering sectors, I have been passionate about engaging young people in STEM and raising awareness of the wonderful careers that STEM can lead you towards for some time. I started volunteering for SmartSTEMs and was blown away by the impact it has on young people.



**DUNCAN
THOMSON**

Lecturer, University of the West of Scotland

I am a lecturer and degree programme leader in the School of Computing, Engineering and Physical Sciences at University of the West of Scotland. After more than two decades of seeing predominantly males choosing his subject, I am passionate about increasing the diversity of my students, and want to make sure these interesting, creative, rewarding and world changing career paths are clear choices open to everybody.



**PAUL
TYLER**

Kirkhill Primary School, East Renfrewshire

I have been teaching for 13 years now and am currently Principal Teacher and STEM coordinator at Kirkhill Primary School in East Renfrewshire. I am proud to be a fellow of the Primary Science Teaching Trust and an active member of the Association of Science Educators. In addition to teaching I regularly deliver teacher training workshops, write articles and resources and present at conferences across the UK talking about my experiences teaching science.

TOM VINCENT

CEO, 20/20 Business Insight

I am passionate and committed to raising awareness about the variety of exciting opportunities that can come from STEM based skills.

Having worked in STEM related industries for the last 15 years, there are so many wonderful opportunities that many people simply are not aware of.



ANNE-MARIE BALFOUR

Security enthusiast and STEM advocate

I openly admit I'm a geek. I've worked in IT since the mid-eighties and I know how little diversity exists in the area. I believe that industry would benefit hugely by bringing more diversity to the workforce and more than most, I appreciate it's no easy task. I have been involved in trying to make the tech area more diverse since the late eighties where I joined other females in IBM in a group called 'Connecting Women'.



FINANCIAL REVIEW AND POSITION



DIGITAL DAIRY VALUE CHAIN

Building on our previous work, we have been brought into contact with many more people in Ayrshire and Cumbria, and built some fantastic new relationships with those in the dairy industry and academia.

[Project website](#)

GLASGOW CITY COUNCIL PILOT PROJECT

We have almost finished our delivery of the project over the 2023/2024 academic year. So far, results are very positive and feedback from both students and teachers has been very strong.

NORTH LANARKSHIRE PROJECT W/ COMMSWORLD AND YES

Now in it's third year, this project has been a success for the young people of North Lanarkshire. Every primary school in the area has now had at least one event, with new and exciting workshops in plan for the coming academic year to build on the digital learning that has already taken place.

VISION

The financial statements have been prepared in accordance with the current United Kingdom statutory requirements and the Charity's Memorandum and Articles of Association.

The main source of funding in the past year has been grant income from SRUC of £126,332, donations totalling £99,500 were also received from Glasgow City Council.

We moved forward on our tiered sponsorship packages. Nine Twenty were recognised for their significant benefit in kind support to SmartSTEMs with an appropriate sponsorship package.

The Charity had net incoming resources for the year of £35,178 (2023: £22,049). With unrestricted reserves of £63,700 (2023: £98,878) at 30 April 2024.

FUTURE PLANS

The major project for 2024/25, as was the case in 2023/24, is our continued geographical expansion and extending our reach to those not currently proportionately benefiting from the work done by others working in our sector: Children in Care, Neurodiverse groups, Low Attendance Students and other underrepresented groups.

We intend to enhance our offering to rural island communities of Scotland, with Orkney, Islay, Shetland and Skye in our plan. We also intend to extend our reach in England, with a particular focus on the South West coast.

STRUCTURE, GOVERNANCE AND MANAGEMENT

Governing document

The Charity is a Scottish Charitable Incorporated Organisation (a SCIO). It was registered in its current legal form on 19 April 2016. It has a single tier structure and as such the trustees are the members of the charity. A full copy of the constitution is available on request.

STATEMENT OF FINANCIAL ACTIVITIES INCLUDING INCOME AND EXPENDITURE ACCOUNT

	Unrestricted funds 2024 £	Unrestricted funds 2023 £
Income and endowments from:		
Donations and legacies	79,811	35,960
Charitable activities	296,832	233,165
Other trading activities	111,500	89,500
Other income	-	162
Total income	488,143	358,787
Expenditure on:		
Charitable activities	452,965	336,738
Net income for the year/ Net movement in funds	35,178	22,049
Fund balances at 1 May 2023	63,700	41,651
Fund balances at 30 April 2024	98,878	63,700



smartstems.org

0141 564 8488

Registered Scottish Charity No. SC046487