

The Smallpeice Trust

# Annual Impact Report



2022/23



smallpeice

Dare to imagine

# Inspiring the STEM talent of the future

Much has been delivered over the last year to move forward the Trust's focus on inspiring students to study STEM. I want to take this opportunity to thank Dr Kevin P Stenson for his 10 years leading the team and helping us reach more young people with a focus on female students.

Research to mark the Arkwright Engineering Scholarships' 30th anniversary, again highlighted the need for a more diverse workforce and to address the shortage of talent in the engineering industry. Thanks to our partners, we reached 60,000 young people over this last year and nearly 30,000 girls, providing inspiration to study STEM and consider engineering as a career.

Part of the Trust's focus is thinking about the requirements for the workforce of the future and adapting our approach. The Arkwright research showed general agreement that the requirement for soft skills is likely to increase, as we see the growth in automation and AI. We have now embedded the Skills Builder Framework into our programmes to ensure that we help young people develop vital life skills.



Having served as a Trustee since 2018, I am delighted to be given the opportunity to Chair during this exciting time of innovation and growth. The Trust is looking to the future and pleased to welcome Helen Cuthill as our new CEO to engage and inspire the next generation of diverse and talented engineers and leaders.

Thank you to everyone who has worked with us to make an impact over this last year - our corporate partners, charities, teachers, universities, alumni, parents, and the dedicated team at the Trust. I look forward to working with you and sharing my life-long passion for science and engineering whilst enabling the widest possible access to careers in STEM.

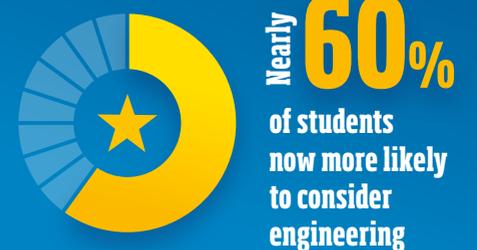


*Alison Halstead*

**Professor Alison Halstead**  
Chair, The Smallpeice Trust

## YEAR IN NUMBERS:

Nearly  
**60,000**  
students inspired  
to take part in activities



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# WORKING COLLABORATIVELY TO INSPIRE THE NEXT GENERATION OF STEM PROFESSIONALS

The Smallpeice Trust is celebrated for its hands-on, practical approach to learning, which provides young individuals with spaces to explore, experiment, and learn by trial and error, all firmly grounded in the knowledge and skills of real-world settings. I personally hold this aspect of the Trust in high regard, as it fosters memorable and enduring engagement.

The Trust has earned a great reputation for its outreach and inclusivity efforts, particularly in encouraging girls to explore STEM, with the goal of bridging disparities and providing opportunities to youth who might otherwise lack access. This is actively demonstrated both in the number of girls reached and the positive impact on their attitudes to STEM.

The enduring legacy of The Smallpeice Trust is palpable, given its significant role in inspiring, educating, and empowering the next generation of STEM professionals. Giving nearly 60,000 students the chance to experience engineering, helps create a pipeline of talent for the future.

Driven by my passion for education and learning, I am eager to continue this work and adapt to the evolving global landscape, nurturing an inclusive and diverse STEM workforce. Engineers will be needed to address many of the challenges faced by our future society, bringing creativity and problem-solving skills, alongside technical excellence.

I am committed to building upon the outstanding work accomplished thus far. Big challenges require a big vision for the future, which I look forward to shaping alongside the Trustees, the dedicated staff team, and our partners.

By working collaboratively over the long-term we can expand the impact of our initiatives and identify areas for improvement. This approach will ensure that The Smallpeice Trust remains strategically adaptable and aligned to the ever-evolving landscape of the STEM field.



*H. Cuthill*

**Helen Cuthill**

Chief Executive, The Smallpeice Trust

# STEM IN SCHOOLS

Introducing  
students to the  
exciting world  
of engineering

KEY  
STATS:

**85%**

of students learnt  
something new\*

**89%**

of students enjoyed  
the STEM Day\*

**97%**

of teachers rated their STEM  
event as excellent or good\*

Nearly **1,000** schools received  
a STEM event

**44,182** students have benefited  
from a STEM activity

During the 2022/23 academic year, over 44,000 students have been impacted by an immersive STEM experience with The Smallpeice Trust, funded by our partners. The aim of the STEM programme is to maximise the number of students who can benefit from a STEM activity and by increasing the number of multi-school virtual events offered, we have seen the number of students grow from nearly 37,000 last year to over 44,000 this year.

Our Education Team while continuing to deliver our core STEM events, are also developing and delivering more bespoke STEM activities for our exciting range of partners. These include STEM competitions, in school STEM events and resources for teachers. This year we also offered virtual short STEM Sessions where we give classes of Year 8 and 9 students the chance to get creative and hands-on with engineering.

Schools often tell us how difficult it is for them to link STEM subjects to real world applications, and that is the problem our STEM activities solve. All of our events complement the national curriculum in science, technology, engineering, and maths (STEM) and are aligned with the Skills Builder Partnership to develop students' soft skills.

Teachers have done an amazing job over the last year, and we're pleased to support them by providing STEM enrichment.

Here's some of the feedback received for our STEM activities:

*"The whole of Year 9 participated. Girls were really excited and focused, some good show of teamwork. By the end we had so many functional hands which stood well to the challenges, a tough time picking winners! Thanks so much for providing this activity."*

**Secondary School, STEM Sessions**

*"Great experience, great organisation. Really valuable aspirational event."*

**Chilton Trinity School, Global Underwater Hub STEM Challenge**

*"I'd just like to say thank you to the team at The Smallpeice Trust, and their funders, for sharing the resources to make Coding Success so much fun. It was lovely at parents' evening last night to hear from students and parents who had really enjoyed using the resources at STEM club."*

**Fulford School, Coding Success**

(fully funded by BAE Systems and the Royal Air Force)

*"Brilliant event and delivery, students were engaged and enjoyed learning new skills and about engineering."*

**Icknield High School, Aircraft Challenge STEM Day**



*"The children learnt something that they wouldn't have been able to do without the resources and information supplied. This is a good way for the children to have an insight into engineering."*

**The Oaks Primary School, Road to RIAT**

(in partnership with the RAF Charitable Trust and the RAF, and supported by Accenture)

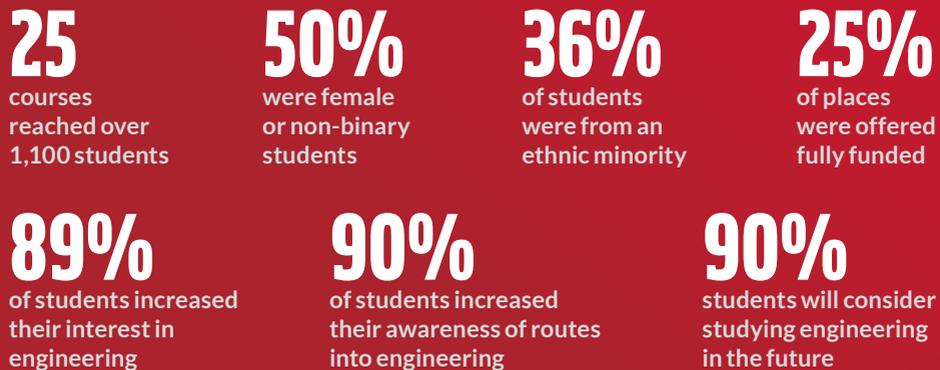




# ENGINEERING COURSES

Exploring the world beyond the classroom

## KEY STATS:



In 2023 we have grown our face-to-face programme with popular events like Space Science returning to the schedule, running alongside consistent favourites such as Girls into Engineering. New courses like Explore Engineering run by new academic partner, the University of Bath have further increased the number of courses on offer. Our student satisfaction and recommendation scores show that everything has been well received.

Perhaps our biggest highlight this year has been the introduction of our new format Engineering Experience courses. Our Education Team has developed and delivered a fantastic first year – with an overwhelmingly positive reception from the students. These courses offer a range of modules covering different engineering disciplines, giving students a great overview, and allowing partners to support a course relevant to their priorities.

All this allows us to move into the 2023/24 academic year in a strong position to build from.



Every course is supported by one of our inspirational STEM Engagement Specialists, who provide specialist input and expert support.

STEM Engagement Specialist Faith's experience:

*Courses this year ran over the Easter and Summer school holidays both virtually and face-to-face, enabling students from all over the UK to get involved in a variety of hands-on engineering activities, from building radios to programming. I really enjoyed delivering the face-to-face courses giving students unique experiences at university as well as opportunities to socialise with quiz nights and board games. Virtual courses were also amazing opportunities for students to explore engineering at home over the summer using our Google Classroom platform.*

*My highlight this year has been our Girls into Engineering course which ran for the 8th time since it's conception in 2015. It was inspiring to see 100 girls from across the UK working together, pushing themselves out of their comfort zones with soldering challenges, learning to code, and giving presentations. The facilitators from Leonardo and GE HealthCare were integral in enabling the girls to explore engineering by delivering fun, engaging projects, and talking about their personal experiences of apprenticeships and degrees. As the course lead, seeing the students develop over the three days of the course was very rewarding and is the pinnacle of why we do our job – to give every young person the opportunity to explore engineering.*

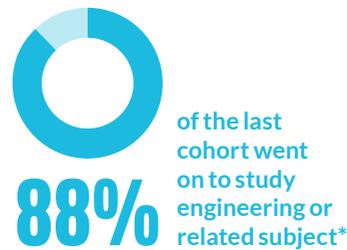


# Make a difference with engineering

Arkwright Engineering Scholarships are the most prestigious of their type in the UK. This two-year programme gives highly talented A-level or Scottish Highers students insights into engineering, tools to pursue their dream careers and industry experts to guide them. This year saw the programme run its first in-person Award Ceremony for the 239 new Scholars since COVID restrictions were fully lifted in early 2022. Interviews for new applications continued to take place virtually following the success of the previous two years.

2022 also saw Arkrwright Engineering Scholarships celebrate 30 years and to mark this milestone, we released our 'Future of Engineering' report. We surveyed alumni, teachers, and companies and uncovered some interesting perspectives on where the industry is going and how we can improve it together. Key findings are that 61% of Scholars believe the scholarship had a strong impact on their career and 91% of partner schools feel the programme makes students more employable. Overall, 97% agree that is important to encourage young people from all backgrounds to be engineers.

## KEY STATS:



Nearly **1,400** scholarship applications

**317** Scholars attended a Connect Day

**589** Arkrwright Scholars

**1,200+** partner schools

## 2022 Scholar shares her experience...



I applied for an Arkrwright Scholarships as it was the first time I had ever seen any scholarship or award related to engineering, so I was keen to just give it a shot. As an avid Formula One fan and car enthusiast, being an Arkrwright Scholar is totally a dream come true for me. I couldn't quite believe that McLaren Racing was my sponsor - I was absolutely thrilled!

So far, I have worked on building an experimental scale model of a wind tunnel which will be able to quantitatively test and visualise airflow using load cells and an Arduino microcontroller. I have used my scholarship funding for materials and equipment to complete this project to a high standard. I also purchased some engineering books to expand my knowledge beyond the subjects we learn at school.

A personal highlight for me is my mentor being a design engineer at McLaren Racing! I really enjoy hearing about his experiences at Formula One race weekends, and I am in awe when he details the work that goes behind each race. I had the opportunity to visit the McLaren Technology Centre twice as an Arkrwright Scholar, getting to see the engineering rigour and meticulous detail behind their car design, and was able to meet my mentor in person!

On my connect days, I attended engineering course taster sessions at the University of Nottingham where we worked in teams to complete hands-on tasks led by professors. My personal favourite being the Product Design Engineering workshop. The day also included a tour around the fantastic facility where we learnt about new cutting-edge technologies utilised in industry.

# ARUNIMA UNDE



When I take a step back and reflect, it's amazing to even think about. An Arkrwright Scholarship really is the most amazing opportunity, it opens so many doors for your future, and provides the confidence needed for the next step in your life.

So, if you're thinking of applying? **Go for it!** 🗨️

# KEEPING YOUNG PEOPLE SAFE



At The Smallpeice Trust we are committed to keeping children and young people safe as an integral part of our values. It is essential that students accessing our programmes are well protected and that procedures are in place to safeguard their welfare.

Safeguarding young people involved in our programmes continues to be a key priority for us. We also know that our staff are fundamental in achieving this. Safeguarding being everyone's responsibility is a thread that weaves its way through from initial recruitment of staff, ongoing training, supervision and supporting staff in knowing how best to look after young people. We know that young people need to feel safe, secure, and supported in order to fully engage with the learning provided by our programmes.

Our focus over this last year has been to further develop our staff to better support young people as the impact of the social interaction lost during COVID is still being felt. We have focused specifically on training up our event leaders to be able to act as Mental Health First Aiders for young people if required. This has enabled staff to feel more confident in providing immediate support on our residential events programme and ensured that every young person has someone suitably trained to speak to.

We have also continued the rollout of our e-learning training to our supervisors who would provide pastoral care during courses, and our training for mentors on the Arkwright Scholarship programme.

Even within our schools' programme, where responsibility for students sits primarily with the school, we have revisited how we can work more closely with the school staff on the day of the event to best support the whole classroom.

We also understand that parents are rightfully concerned about their child's wellbeing when attending one of our residential courses and have updated our website to include FAQs for parents covering how we manage safety on our courses.



*Lisa*

**Lisa Foster**

Chief Operating Officer,  
The Smallpeice Trust



# NEW PARTNERSHIPS

Working together to ignite young peoples' interest in engineering

Once again, we had the privilege to work with over 100 Trusts, Foundations, and corporate partners who made it possible for us to inspire young people to change the world through science, technology, engineering, and maths. By working with these partners who funded activities in their local communities and beyond, we provided learning experiences for nearly 60,000 young people this year.

In addition to funding and sponsorship, partners support our programmes by providing careers talks, mentors, STEM ambassadors, practical projects, and access to engineering workplaces.

Partners enable us to explore different ways to reach more young people. Over the past 12 months, we have been selected as both a new and trusted partner responsible for developing and delivering a number of new programmes.

The following four pages show a few highlights:

KEY STATS:

Over **100**  
partners funding activity

**10,000+**  
volunteering hours

Nearly **60,000**  
young people benefited



**Formula 1**



Formula 1, the F1 teams and the FIA are working together to drive STEM engagement in UK schools through a series of STEM Challenge Days facilitated by The Smallpeice Trust. Through the days, F1 aims to teach secondary school children across the UK about engineering and careers in STEM.

The STEM Challenge Days are part of the continued commitment by F1 to increase diversity in motorsport and make the sport more accessible. The participating schools were selected based on the EngineeringUK EDI Criteria, which identifies schools that are likely to reach more young people from groups that are under-represented in the engineering profession, such as women, ethnic minorities and from lower socioeconomic backgrounds.

**Pat Symonds,**  
**Chief Technical Officer**  
**at Formula 1, said:**

*"The importance of initiatives such as STEM Challenge Days cannot be overstated. These days give students a comprehensive introduction into the key pillars of engineering and problem solving that are vital for F1. We hope our STEM Challenge Days can inspire the next generations of engineers, designers, and innovators to study STEM subjects and pursue a career in motorsport."*

## Amazon Future Engineer

Amazon Future Engineer works with The Smallpeice Trust to advance their mission to ensure underserved and underrepresented students have equal access to computer science skills and opportunities. The Trust runs high impact, face to face, engaging activities for students, providing the opportunity for Amazon volunteers to get involved in delivery.

The Smallpeice Trust is a valued partner to Amazon Future Engineer, thanks to the intensive experience that we provide for the students, and the detailed insights that we are able to provide to evaluate the success of our programmes. Schools consistently rate the programmes highly, and Amazon's own volunteers have seen first-hand the breakthrough moments students experience during our hands on building sessions.

The Amazon Future Engineer team have been able to select programmes that are closely aligned to their goals, delivering multiple hours of learning to each student that makes a real difference to their learning journey. And in working with the Trust, they are also supporting teachers and schools to deliver their achievement goals.

**Paul Nicks,**  
**Technical Account Manager**  
**at Amazon Web Services,**  
**said:**

*"It's been an absolute honour to support the STEM Days with The Smallpeice Trust as an Amazon Future Engineer volunteer. I have seen first-hand how Smallpeice inspires the next generation of Engineers through hands on, engaging sessions. To see the students of all genders become fully invested in the tasks, to see them work as a team, them being inquisitive and wanting to learn more. It's a joy and sense of achievement to see the students leaving the day with a newfound interest in Engineering and hopefully on the path to a newfound career."*

amazon future engineer



## Merchant Taylors' Company

The Merchant Taylors' Company have generously funded Arkwright Engineering Scholarships since 2004, creating a long-standing relationship with us. More recently, they have funded further enrichment activities to younger age groups to engage, increase knowledge and confidence and ultimately encourage more students to apply for Arkwright Engineering Scholarships.

Last year we ran three STEM Days with each participating school receiving a Think Kit to continue the STEM learning experience. Then in June 2023, they kindly sponsored a virtual Primary School Live Stream event for six of their Primary Schools and finished off the year by sponsoring an Engineering Experience course in August.

This pipeline approach has been a great success so far and we look forward to working with them over the next academic year.

*"I would like to say thank you because I learned a lot in a fun way."*

**Female Student,**  
**St Saviour's and**  
**St Olave's Church**  
**of England School**  
**STEM Day**

## Squarepoint Foundation

In August 2023, the Squarepoint Foundation gave a generous donation to the work of The Smallpeice Trust. Founded in 2021, the Foundation is focused on helping communities around the world. Currently, it supports local populations by partnering with charities, advancing research and education in STEM, and helping in times of crisis by contributing to relief efforts for events that affect the world as they arise.

The donation was given to The Smallpeice Trust to fund our vision of inspiring and supporting young people into careers in STEM, which will allow the Trust to allocate it strategically. We are delighted to be partnering with the Squarepoint Foundation and appreciate the forward-thinking approach of offering flexible funding that will really make an impact.

**Allison Henry,**  
**Foundation Manager**  
**said:**

*"Squarepoint Foundation has prioritised STEM education for children of all ages and is proud to support The Smallpeice Trust as they continue to deliver outstanding educational opportunities in this space."*

## University of Bath

In August 2023, the University of Bath ran their first engineering summer school for Year 10 students in partnership with the Trust. Working together allows the university to focus on providing academic content, while the Trust recruits the students, advises on engaging younger age groups and provides 24/7 in loco parentis care at the course.

The course was led by an **Arkwright Scholarship Alumnus, Dr James Scobie.**

**He said:** *"The Smallpeice Trust were absolutely instrumental in making the Explore Engineering Summer School at the University of Bath a success. Without the experience, knowledge and passion of their dedicated staff members, the course simply couldn't have taken place. We hosted 50 school students at the University for three-days, giving them a flavour of the different types of engineering we have to offer in our Faculty. I am certain that through the incredibly important role the Trust carries out, together we will have inspired young people to pursue careers in science and engineering. We at the University are motivated to continue our relationship with the Trust and there is huge appetite to make the Summer School an annual event."*

## THANK YOU to all our partners

Working with like-minded organisations gives us all a greater impact.

With a soaring demand for engineers across all sectors, we need to strengthen the talent pool and open up more opportunities to underrepresented and disadvantage young people, bringing more young people from all backgrounds into engineering and technology.

Thank you to all our partners for working with us as we grow our programme of face-to-face events alongside our successful virtual activities.

**Your support is what makes what we do possible – igniting and fuelling young people's passion for engineering.**

# MEET OUR TRUSTEES

Our Board of Trustees works closely with our Executive Team to guide decision-making on strategic issues and hold them to account for their leadership of the Trust.



### Professor Alison Halstead

Professor Alison Halstead is the Chair of The Smallpeice Trust. She became a Trustee in September 2018 and is also a Trustee at City and Guilds.

Alison led the development of the Aston University Engineering Academy for 14 to 19-year-olds and has chaired a parliamentary Skills Commission Inquiry into Higher Level Technical Skills. City and Guilds awarded her an Honorary Fellowship for her national work on Apprenticeships, University Technical Colleges, and High-Level Technical Skills.



## Andy Parker

Andy Parker is a Chartered Building Services Engineer and has spent most of his career working on the design and delivery of R&D laboratories, pharmaceutical manufacturing, and industrial projects.

Andy is passionate about interdisciplinary design and the value that is created when different disciplines work together in an interactive way and is an advocate for education that focusses on a multi-disciplinary STEAM approach to problem solving. Andy is motivated by helping and supporting the least advantaged to be able to succeed through a career in engineering.



## Gavin Thompson

Gavin Thompson is a Chartered Mechanical and Electrical engineer and joined The Smallpeice Trust as a trustee in 2015 where he leads the trustee committee which supports strategy implementation.

Gavin is passionate about 'making' as a means of bringing STEM related studies to life and has been involved in several community projects constructing pop up art installations. He is also a current trustee of Design Ed, a London based charity which brings structured making into primary schools.



## Glyn Dean

Glyn Dean recently retired for the second time from the Royal Air Force where she was responsible for the strategy and implementation of the RAF's Youth and STEM Programme.

Glyn's work in the development of a range of inclusive STEM experiential learning interventions at both primary and secondary level has been underpinned by the aim of improving gender and ethnic diversity in the engineering and flying specialisations. Glyn was awarded an MBE in 2013.



## Graham Heaven

Graham Heaven is a Fellow of the Chartered Institute of Management Accountants, initially trained in the Building Industry he gained experience in the manufacturing sector, working for several household names before becoming Financial Director & Company Secretary at a prestigious manufacturer of Kitchen and Bathroom Furniture.

Graham's managerial experience covers a wide range of disciplines, and he strives toward achieving better business practices, processes, and Governance through the application of technology.



## Jacqueline Newsome

Jacqueline Newsome is former Head of Science and an experienced school leader who has held several positions at senior level including that of Headteacher.

Jacqueline has taught in urban multi-cultural primary and secondary schools in England and her current areas of expertise include safeguarding, pastoral care, and school leadership. She has been recognised nationally as an outstanding practitioner having achieved Advanced Skills Teacher status.



## Ram Ganesh

Ram Ganesh is an award-winning information security leader, currently working as Senior Director of Security Operations at Arm. He read a degree in Mathematics from Queen Mary, University of London and has supplemented this with various qualifications including CISSP and CISM.

Ram is incredibly passionate in improving social mobility and diversity and inclusion in STEM having gone through the journey himself.



## Shirin Dehghan

Shirin Dehghan is a serial entrepreneur and investor. After studying Electronics Engineering, Shirin started her first company in 2002 which she grew from an initial idea into a successful international business.

Shirin sold the business in 2013 before becoming an angel and venture capital investor as well as a board member of various tech companies. Shirin's latest venture has grown over the last three years to become one of the highest performing quant funds in the industry.



## Steve Robins

Steve Robins has worked in engineering and manufacturing for over 30 years across many sectors including automotive, motorsport, aerospace, energy, and defence.

Technology has been the common thread during Steve's career, and he has seen first-hand how important the pipeline of talent is to drive industrial and national growth. Witnessing the progression of talented young engineers has been a great source of personal satisfaction for Steve.



## Trevor Gill

Trevor Gill is an independent telecommunications consultant. He is former chief scientist of Vodafone Group R&D and a Vodafone Distinguished Engineer and led the team that initiated the design of the world's first GSM mobile phone.

Trevor is a Fellow of the Royal Academy of Engineering and of the Institution of Engineering and Technology. He is also a trustee of Radio Communications Foundation, another charity working to encourage young people to consider careers in engineering



“

I loved how friendly it was and how many friends we made. I also love how hands on we got to be during the days. All our supervisors were really nice and friendly and made this a very enjoyable experience.

**Female Engineering  
Experience Student  
2023**

**smallpeice**

Dare to imagine

The Smallpeice Trust, 74 Upper Holly Walk,  
Leamington Spa CV32 4JL

The Smallpeice Trust is a company limited by guarantee, registered in England.  
Company number 00882371. Registered Charity number 313719

Inspire all students to believe in their abilities and raises their aspirations in STEM

The Smallpeice Trust  
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2022/23