



IMPACT REPORT

The Charitable and Educational Trust
of
The Worshipful Company
of Scientific Instrument Makers

2024-2025

INTRODUCTION

The purpose of this report is to outline the projects of the Charitable and Educational Trust ("CET") of the Worshipful Company of Scientific Instrument Makers ("WCSIM") over the past year.

Our charitable aims:¹

- The relief of any necessitous person who is a member of the Company.
- The relief and/or educational support of dependants of a deceased member.
- Scholarships and prizes to recognise those advancing the design and construction of scientific instruments.
- Grants and donations to charitable organisations promoting education and training in the field of science and technology.
- Provide educational and training opportunities that relate to scientific instruments throughout their life cycle as well as rewarding good practice.
- Support the Lord mayor and Corporation of The City of London.



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ORGANISATIONAL OVERVIEW

The WCSIM is a mutually supportive community of scientists, engineers and STEM students who come together to share knowledge and experience, influence opinion and policy and enjoy each other's company. Members include 16-year-olds to nonagenarians, who come from many backgrounds and branches of science and engineering and include numerous distinguished academics, Nobel prize winners and business leaders.

The membership encompasses those who join seeking opportunities to further their careers in the craft of making and using scientific instruments as well as those who wish to give something back by supporting and mentoring others. In other words – "Moving Forward, Giving Back". The CET is a distinct and separate legal entity to the WCSIM. It is managed by its Trustees, all of whom are Liverymen of the WCSIM.

GEOGRAPHIC AND DEMOGRAPHIC SCOPE

The CET and WCSIM are dedicated to supporting young individuals, affiliated educational institutions and organisations, particularly in local areas that are under-resourced. One of our objectives is to eliminate obstacles to opportunity by enhancing educational experiences for those who have limited access to STEM programmes and resources. We strive to identify and nurture exceptional individuals, facilitating their advancement in the Company to Freeman, Liverymen, and potentially Master, while ensuring that the Company remains pertinent to their needs. Our geographical focus is on aiding local underfunded schools and primary classes through initiatives such as Primary Engineers. We do not impose restrictions on grants based on geographic location or demographic factors when selecting outstanding candidates. This methodology reinforces the company legend, "Moving Forward, Giving Back."

GRANT MAKING STRATEGY

The charity's grant-making strategy is designed to enable innovative, hands-on educational projects that enrich the STEM (Science, Technology, Engineering, and Mathematics)² curriculum and reflect the values of the WCSIM. We prioritise partnerships that offer meaningful learning experiences, particularly for those in primary, secondary, and further education.

Grants are awarded for initiatives that demonstrate clear educational value, have potential for wider adoption and that encourage collaboration between schools, academia, industry and individuals. The aim is to support projects that promote creativity, technical skills and real-world applications, especially those linked to science, measurement, engineering and mathematics.

All funding decisions are underpinned by a commitment to sustainability and shared learning, with an emphasis on active engagement from members and volunteers.

² The acronym is due to change internationally from STEM (Science, Technology, Engineering, and Mathematics) to **STEAM** (Science, Technology, Engineering, Arts, and Mathematics) to emphasize the integration of creative and artistic skills with technical subjects. This shift aims to foster creativity, innovation, and problem-solving by combining the critical thinking of STEM fields with the imaginative approaches of the arts.

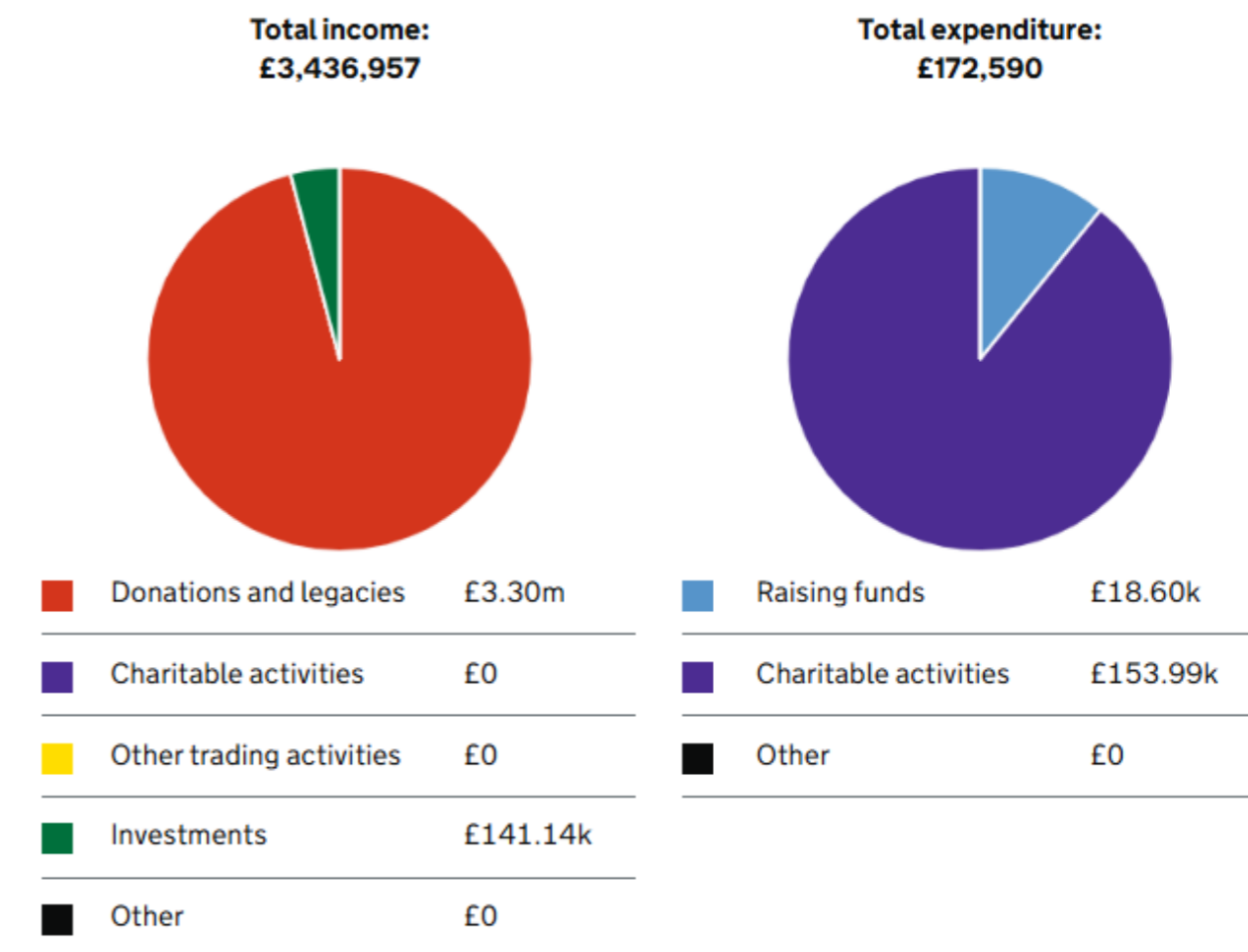
GRANTS OVERVIEW

Activities - how the charity spends its money

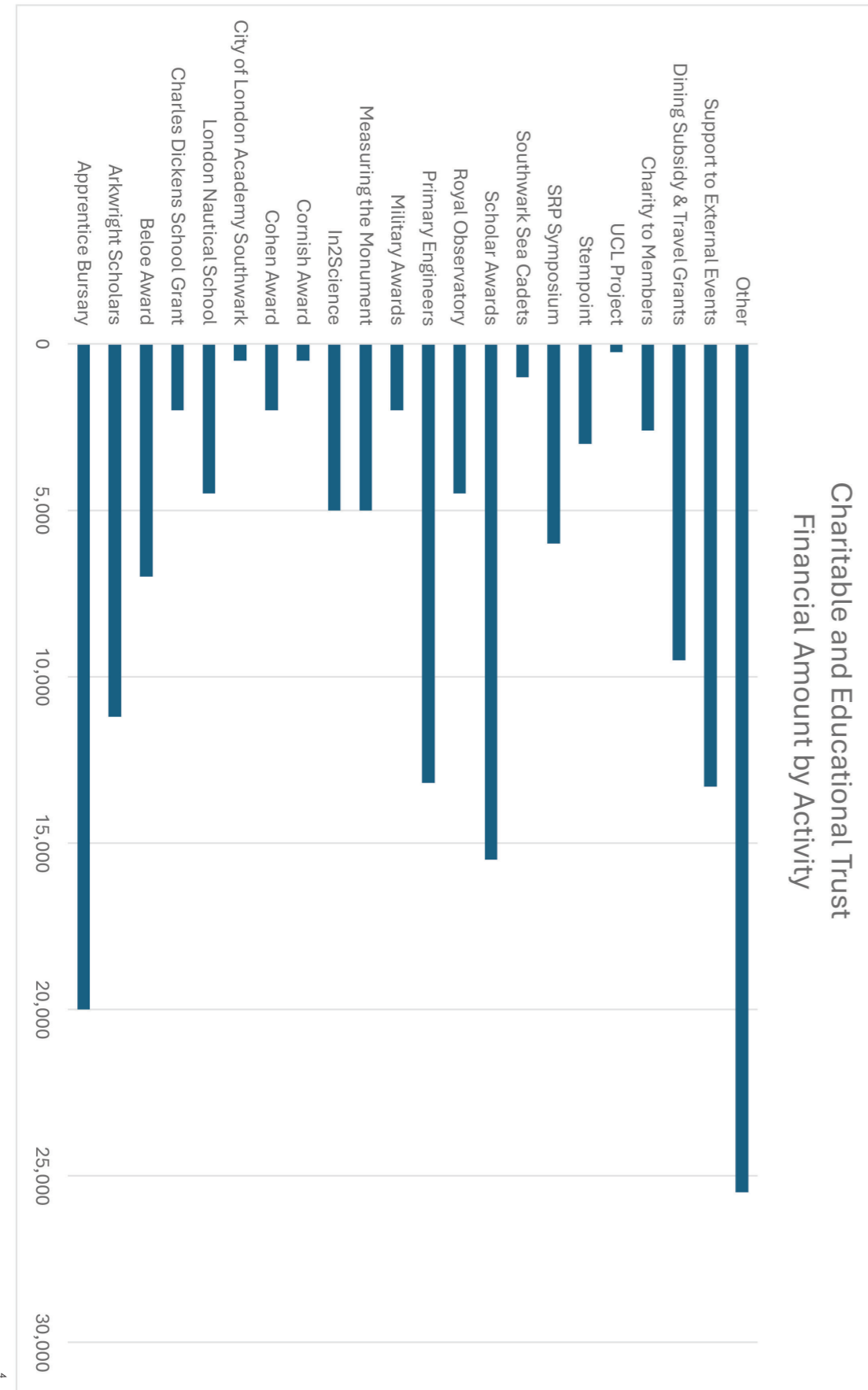
For the relief of any necessitous person who is or has been and liveryman of the company who is a widow, widower, orphan or dependent of a deceased liveryman or freeman. For making grants, donations or subscriptions to charitable organisations having as objectives the promotion of education and training in the field of science and technology. For any other charitable purpose approved by the Trustees.

Where total expenditure is higher than Investment Income, the difference comes from a reduction in held assets.

Income and expenditure³



³ Data for financial year ending 30 September 2024 held by the Charity Commission



⁴ Data taken from Hon. Treasurer's Report for the year 2024/25 and financial statements 2025.



The London Nautical School received an annual grant of £2,000 along with an additional grant of £2,500 which was put towards the purchase of microscopes and computer laptops. These additional components allow students to engage with the science-based curriculum in ways which would otherwise not be possible.



**CITY OF LONDON
ACADEMY
SOUTHWARK**

The WCSIM continues to support an annual STEM related prize awarded for best student at an annual prizing giving event held at City of London Academy Southwark.



**The
Charles Dickens
School**

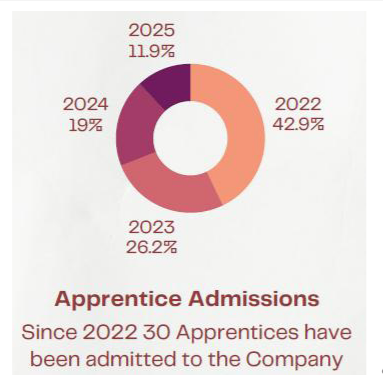
The Charles Dickens Primary School received its annual grant of £2,000 which has been put towards a science laboratory project which will benefit all pupils in Years 1 to 6 and will impact teaching and learning in Key Stage I and II. The school is also one of five supported by the Primary Engineer™ initiative which has received SIM funding of £11,000 to instill (STEM) into the curriculum in a meaningful way and hit National Curriculum targets.

The Company offers apprenticeships to those who are studying science, technology, engineering, mathematics, instrumentation and related scientific subjects at sixth form and university. Each Apprentice is allocated an Apprentice Master as their mentor, and they are formally bound in an admission ceremony. The Company does not offer training in the traditional sense. However, the Apprentice Masters role is to mentor the Apprentice during their sixth form and university years of study with help and advice on future careers, finding work placements, and networking. The Apprentice Master also guides the Apprentice towards becoming a Freeman of the Company on reaching 21 years of age.

The CET currently offers a bursary of £500 a year to all eligible Apprentices, which will rise to £750 as of 2025/26. This amount is released subject to receipt of a short (minimum of one side of A4) report to their Apprentice Master and the Apprentice Warden each year. Apprentices submitting reports are also entered into the Kenneth Walton Apprentice Award for best report, which is provided separately by legacy donation. In the case of students starting the first year of their undergraduate course, the report covers both school and University activities during the year.

The report covers a summary of the academic and other related achievements over the past year and includes any notable targets or plans for the forthcoming year.

If the Apprentice continues in post graduate studies, an annual bursary can continue for a further three years.



⁵ Of reports received in the year 2024 (one of the best years on record). Reports for 2025 are expected by December 2025.

⁶ Data taken from annual admissions since 2022 including Arkwright Scholarship Apprentices. As of 1 January 2025, the Livery had 41 Apprentices, a significant rise came post COVID. A natural attrition is to be expected as Apprentices reach the maximum age threshold and in the majority progress on to become Freeman.

ARKWRIGHT SCHOLARSHIP APPRENTICES

The CET and WCSIM contribute to the Arkwright Scholarship¹¹ via the Smallpeice Trust, one of the most prestigious engineering scholarship schemes in the UK. The Arkwright Scholarship chooses high-calibre candidates from participating schools and colleges and helps them achieve their ambitions.

Each year Arkwright offers the WCSIM four outstanding scholars for SIM to take under its wing. Arkwright awards these scholars £300 a year paid by the CET, for their two A – Level years. In addition to this, the WCSIM also offers these high-flyers the chance to be mentored by experienced and well-connected Liverymen by becoming “apprenticed” to them for four years and received the additional bursary funding. (see previous section).

BELOE FELLOWSHIP

The BELOE Award is our highest award. It supports a single, outstanding postdoctoral researcher for up to three years. It is an award based on past achievement and continuing excellence.⁷

Following a competitive process the title of BELOE Fellow and membership as Freeman is awarded to one recipient for two years, along with £10,000 as two payments of £5,000 each year. The expectation is that these fellows will continue in the Livery after their Fellowship and hopefully progress to Liverymen.

BELOE FELLOWSHIP RUNNERS UP

The title of BELOE Scholar and membership as freeman for two years is awarded to runners-up considered by the award panel to be of sufficiently high quality, along with financial support to attend official London-based Livery events. The expectation is that these fellows will continue in the Livery after their Fellowship and hopefully progress to Liverymen.

POST GRADUATE SCHOLARSHIPS

Those selected for Post Graduate Scholarships are awarded £2,000 as two payments of £1,000 each over two years. The first immediately and the second approximately 12 months on submission of an interim report.

They also receive Freeman for two years along with financial support to attend official Londonbased Livery events. The expectation is that these fellows will continue in the Livery after their Fellowship and hopefully progress to Liverymen. Five awards were made in total in 2024/25.

⁷ Sim History 1989-2014

WCSIM / IPEM AWARD

Awarded for the best submitted essay. The winner is invited to attend the annual Admission Court Dinner where they receive a medal, certificate and prize of £500.

CORNISH AWARD IN CONJUNCTION WITH INSTMC

Awarded to an individual, group or company that has excelled in some dimension of scientific instrument making within industry, academia, national or international laboratories. The winner is invited to attend the annual Admission Court Dinner where they receive a certificate and prize of £1,000.

COHEN AWARD

The Cohen Award is given to two recipients, one from the University College London (UCL), the second from City University, who are studying an engineering subject. They can be either undergraduate or postgraduate students. Those selected for a Cohen Award receive £2,000 as two payments of £1,000 each over two years. The first immediately and the second in approximately 12 months on submission of an interim report.



Annual awards are given to the highest scoring Commissioned and Non-Commissioned Officers on the Hydrographic course at the Royal Navy Hydrographic School. The winners are invited to attend the annual Admission Court Dinner where they each receive a certificate and prize of £300.



Two annual awards are given to the highest scoring Commissioned and Non-Commissioned Officers on the Military Geospatial Intelligence Course at the Cyber & Specialist Operations Command GEOINT Faculty. The winners are invited to attend the annual Admission Court Dinner where they each receive a certificate and prize of £300.



For the Royal Air Force, the SIM Bowen Award is awarded to the member of the Royal Air Force, Military or Civilian, who has contributed most to the Defence College of Aeronautical Engineering, RAF Cosford. The winner is invited to attend the annual Admission Court Dinner where they receive a certificate and prize of £300.



The Sea Cadet of the Year Award is given to the cadet from TS Cossack, who has contributed the most to the Sea Cadet detachment. The winner is invited to attend the annual Admission Court Dinner where they receive a certificate and prize of £100 in equipment vouchers.



Sea Cadets Southwark "Training the Next Generation"

An annual award of £1000 is made to the Southwark Sea Cadets to support a wide range of activities, both on and off the water. The CET also sponsors the Sea Cadet of the Year.

Activities

- **Water-based:** Sailing, powerboating, rowing, and kayaking.
- **Outdoor and adventure:** Rock climbing, camping, and orienteering.
- **Other skills:** First aid, engineering, weather forecasting, and parading.

Life skills and personal development

- **Confidence and self-discipline:** Cadets learn to be more self-disciplined and confident.
- **Teamwork and respect:** Activities foster teamwork, respect, loyalty, and a sense of community.
- **Preparation for the future:** The program teaches skills such as listening to instruction, accepting feedback, and using initiative, which are valuable for future jobs.
- **Positive habits:** Cadets develop positive habits and thinking.



A detachment of Southwark Sea Cadets from Training Ship Cossack with Master Mr. Jim Webster.



The CET granted the Royal Observatory Greenwich £4,300 towards its education programme, which will establish a fee waiver scheme for local schools that have a high proportion of underprivileged children to visit the Royal Observatory. The organisers hope to allow 32 schools and up to 960 students to visit and engage with STEM learning through the "gateway to science" scheme.





**HONOURABLE
ARTILLERY
COMPANY**



HAC Everest Expedition

A team from the Honourable Artillery Company (HAC) in partnership with the Helmholtz Centre for Environment Research in Leipzig took part in expeditions to Himlung Himal and Everest. During the expedition they successfully collected glacial samples from around Everest and Himlung Himal as part of the Global Atmospheric Plastics Survey (GAPS). GAPS is a worldwide study into understanding microplastics, how they are transported and their environmental impact. This is critical in gaining a better understanding of overall health of our ecosystem. The CET contributed towards the expedition costs and issued team members with Company branded clothing. A journal paper is expected once all collected data has been processed and this will be disseminated across the scientific diaspora.



On the summit of Everest with the HAC's expedition flag and view of the Khumbu Glacier near Everest Base Camp.

Measuring the Monument⁸

Our 'Measuring the Monument' experiment concluded with a presentation of the results at a gathering in the Guildhall. The work has subsequently been presented to the Willen Church Hooke Heritage Society, Robert Hooke's last surviving church near Milton Keynes.

There can't be many current scientific projects that have a direct link with the work of Nicolas Copernicus from over 500 years ago, but the SIM 'Measuring the Monument' project has that claim to fame. It took an accident in Pudding Lane in 1666 which resulted in the Great Fire of London to move this link forward to the work of Robert Hooke and his contemporary Christopher Wren. Both were involved in the restoration project to resurrect this part of London, and it was Hooke and Wren who designed The Monument on Fish Street Hill as a permanent reminder of the catastrophe. The Monument was completed in 1677. Whereas it is generally known that the height of the construction, at 202 feet, is the exact distance between it and the location of the start of the Great Fire, The Monument was also constructed as an Azimuth telescope for Hooke to provide experimental data that confirmed Copernicus' heliocentric theory from the early 16th Century. Hooke's laboratory at the base of the Monument still exists, and in it he set out a series of astronomical experiments to test the Copernican hypothesis. Alas and sadly, the vibration of traffic interfered with the required signal so much that the experiments had to be abandoned.

But what if the vibration could be measured sufficiently precisely and subtracted from the measured signal? Would that not lead to the signal that Hooke was looking for? Enter the study sponsored by the CET to see if 21st Century fibre-optic sensor technology can provide measures of the interference signal. The resulting on-going findings provide impact of historical scientific interest as well as increasing our understanding of factors that inhibited Hooke's original experiment. Conference and journal publications are expected to disseminate these findings, and one of the first in this series is published in the Proceedings of the Society of Photo-optical Instrumentation Engineers.



⁸ Fabian, M. et al., 2025. 'Measuring the Monument' – Fibre Optic Sensor Systems show why Hooke's and Wren's plans for a Giant Telescope within the Monument in London failed. Proc. SPIE Vol. 13639 136397F-4.

Primary Engineer Programmes *...the first step®*



The following message comes from Primary Engineers.

The Primary Engineer partnership is now in its seventh year. We work together on the Primary Engineer Vehicle Programme, inspiring the next generation of engineers in London. This partnership provides the opportunity for ten schools to benefit from a one-day Continuing Professional Development (CPD) training course, the supply of kit and resources to implement thirty projects across two classrooms in each school and a celebration event in our Hall to bring the schools together and celebrate the power of engineering. The classroom sessions allow for sixty pupils to build fifteen Lower Primary shoebox vehicles and fifteen Upper Primary motorised vehicles with learners working in teams of pairs or threes. The partnership has also facilitated the opportunity for five previously trained schools to receive a continuation kit, meaning they can deliver the programme again to a new class, deepening the impact in the school. The Primary Engineer Vehicle Programme provides a fantastic opportunity to engage with engineering, meet and work with engineering professionals and develop engineering skills.

This partnership has also linked five schools with a WCSIM Mentor to support the teacher within the classroom. In January 2025 an in-person training day was held at SIM Hall which allowed both Teachers and Mentors to be in the same room and train together, establishing a working relationship from the beginning. This event will run again in February 2026 with the celebration to be held in June 2026.



The Upper Primary motorised vehicle winner 2025 designed and built by Florence, Tabitha and Rosanna from Robert Bowring School. Now proudly displayed at the hall.



The following message comes from STEMPOINT

STEMPOINT was formed just over forty years ago and continues to promote Science, Technology, Engineering and Mathematics (STEM) to young people. STEM skills are crucial for the future workforce. They drive advancements in fields such as healthcare, sustainable energy, communication and space exploration, shaping the future and ensuring that global challenges can be overcome. STEMPOINT literacy fosters critical thinking, problem-solving, innovation, adaptability and equips individuals to navigate a rapidly changing world.



40

years experience & dedication to STEM inspiration



39012

pupils engaged 2023-2024



2400

registered STEM Ambassadors



38400

volunteer hours 2023-2024

STEMPOINT held its first Celebration ceremony at SIM Hall in October 2024 and repeated in October 2025. This included a display of work in the form of a poster session covering a wide range of assignments – supported by universities, research institutes and commercial businesses – this included research into gene mutation, quantum entanglement, biometrics, machine learning, generative AI and many more subjects.



Senior Warden, Professor Stephen O'Connor addressing the STEMPOINT Celebration Day at the hall.



The Scientific Instrument Makers share an affiliation with In²ScienceUK & In²STEM organisations focused on promoting Social Mobility and Diversity in STEM. Beginning in 2024, the programme supported 851 participants from low socioeconomic backgrounds, providing them with the opportunity to attend an in-person work experience placement, 36 different workshops, and public engagement competitions. The contribution of WCSIM who provide financial support for students is crucial for helping young people from low-income backgrounds pursue their STEM career aspirations and they greatly value the partnership.

This year, 95% of the participants attended a work experience placement, which allowed them to experience a real-life STEM environment, facilitated their interaction with people who chose a STEM career, and provided them with hands-on experience in a STEM area of their interest. Throughout the programme, participants were offered a series of 36 workshops that they could either attend online in a live setting or watch as a recording during the programme or until the beginning of following year, enabling them to benefit from the workshops far beyond the end of the programme. In²STEM participants are highly motivated to go to university and become a STEM professional. More than 90% of participants intend to go to university, would like to study for a STEM degree or apprenticeship and would like to have a job that uses STEM. The In²STEM programme is designed to provide these highly motivated young people with the experience, knowledge and confidence to succeed with their plans.



Students attending a week-long work experience project

The CET's trustees for this period has been made up of the following members.

- | | |
|--------------------|---|
| Chairman: | Professor Ron Summers (outgoing)
Mr. Charles Holroyd (incoming) |
| Trustees: | Mr. Aubrey Dunford
Mrs. Jane Fishwick
Mr. Simon Flower
Miss Susan John
Professor Stephen O'Connor
Mr. James Popper
Mr. Christopher Sawyer
Mr. James Webster, |
| Charity Secretary: | Mr. Michael Devine |

All trustees give freely of their own time to enable the charitable and education trust to carry out its work by overseeing governance, strategy, making key decisions, and ensuring compliance.

Charity Secretary

This year the WCSIM appointed a dedicated Charity Secretary. This is a new role and reflects the amount of time the Clerk's Office spends on charity related activities such as co-ordinating Apprentices and Apprentice Masters, managing appeals for funds, liaising with partners and those receiving funds, organising charity supported events plus secretary duties for the CET and the WCSIM Education Committee.

Mike joins us after a long career in the British Army. Born in Rotherham South Yorkshire, Mike joined the Army in 2001 and spent his early service with The King's Troop Royal Horse Artillery before moving on to the Adjutant General's Corps.

He has spent time deployed on operational tours in Iraq, Afghanistan and South Sudan as well as undertaking staff work at the Ministry of Defence and Permanent Joint Headquarters.

Mike enjoys horse riding, shooting and whisky. He is also a member of the Light Cavalry of the Honourable Artillery Company.

Change of Chairman

The trustees would like to express their thanks to Professor Ron Summers who stepped down as the long-serving Chair this Autumn. Under his guidance, leadership and wise counsel, the CET has gone from strength to strength, with a steady increase in the support and activities that it is been able to offer. His commitment has been remarkable and highly appreciated. We are very grateful.

FUTURE

As we move forward, our focus is on deeper partnerships that deliver meaningful outcomes. New initiatives are on the horizon which will help build stronger futures through education and inspiration. We are committed to offering growth, opportunity, and resilience to everyone we reach. To all those who have generously contributed their time, energy, and money to our Charity and its causes – we extend our heartfelt gratitude. Your commitment transforms every programme, scholarship, or partnership into a foundation for enduring change. We also express our sincere appreciation for those who have established a bequest through their Wills.

