

Working in Partnership with Vertex and the Vertex Foundation: changing lives through STEM education



Our ENTHUSE Partnerships have numerous tangible benefits for young people, schools and employers. In this case study we look at how STEM Learning's partnership with Vertex Pharmaceuticals and the Vertex Foundation, a nonprofit 501(c)(3) foundation, has hugely benefitted all of these groups since they teamed up with us in June 2018.

Vertex Pharmaceuticals is a global biotechnology company that invests in scientific innovation to create transformative medicines for people with serious diseases and improve

peoples' lives. STEM Learning shares many strategic principles with them including: inspiring the next generation to love science; supporting children from disadvantaged backgrounds to engage in STEM; maximising community impact and enabling volunteers to share their passion, and improving the progress of girls in STEM subjects.

Vertex believes that STEM careers are inspired by allowing teachers and students to connect with scientists hands-on and were keen to connect their scientists in their Abingdon facility to local schools and community, with a particular focus on improving the students' progress in STEM subjects.

In 2018, the partnership between Vertex and STEM Learning began through their support of an ENTHUSE Partnership in Oxfordshire.

David Altshuler, executive vice president of Vertex's global research and chief scientific officer, explained,

"Our STEM education programmes are not just about the facts students might learn, or the experiments they might do. It's about helping them connect with a teacher; it's about introducing them to the scientists who work for us. I think it makes it real for them, that they could do it too - and that's hope, that's opportunity."



The Vertex Foundation support has provided over 200 bursaries to attend our immersive, residential offer impacting the future of over 21,000 students.

How to get involved

If you have been inspired by how the Partnership with Vertex has impacted on their local community and young people across the UK and you'd like to know more, please contact us at employer@stem.org.uk or visit www.stem.org.uk/employers/enthuse-partnerships

Follow us:     

Making a difference in STEM education



As with all ENTHUSE Partnerships, the next step was to link Vertex up with a group of schools close to their site – in this case, six were chosen, with a specific focus on reaching young people from more disadvantaged backgrounds. These included: Chilton County Primary School; Harwell School; Manor School; Blewbury School; Northbourne CofE Primary School and Willowcroft Community School.

This ENTHUSE Partnership funding enabled teachers from the selected schools to undertake high quality, intensive, residential Continuing Professional Development (CPD) at the National STEM Learning Centre in York. Following this CPD, Vertex research scientist Susanna Falcon collaborated with teachers from the schools to develop a range of ideas that led to the development and delivery of on-site work placements, educational lessons, workshops and assemblies – all geared towards making science real and exciting for students. These activities have raised the profile of science, linking careers strategy in primary schools and improving the subject knowledge of teachers. They have also increased students' cultural capital and their awareness of the range of careers in science.

Susanna said: "One of the workshops - 'Extracting DNA from Strawberries' - not only engaged young people but blew their minds! It had an amazing impact, resulting in 70% stating it was their favourite school lesson and 99% wanting to become a scientist when they were older."

As well as driving STEM awareness and engagement in schools and the local community, the partnership was successful in its core aim: improving the progress of girls in STEM subjects. This grant also enabled STEM Learning's local team in Oxfordshire to deliver a Primary Science Conference which had a significant impact on the education outreach programme at Vertex. Susanna and colleagues

How to get involved

If you have been inspired by how the Partnership with Vertex has impacted on their local community and young people across the UK and you'd like to know more, please contact us at employer@stem.org.uk or visit www.stem.org.uk/employers/enthuse-partnerships

Follow us:     

also volunteered to become STEM Ambassadors and took part in the formal induction programme. This programme has equipped them with the tools to share their passion for STEM and their experiences of working at Vertex directly to students in schools – in person and remotely.

Laura Deacon, the schools science lead added: "Working with the Vertex team has been absolutely amazing. This funding has allowed us to invest in training that has changed how we teach science - making it exciting and relevant to the children."

The success of the initial partnership in Abingdon with STEM Learning inspired The Vertex Foundation to provide grant funding to help impact teachers from across the UK. In 2019 they granted £100,000 to support bursaries for teachers from all UK schools to engage with STEM Learning's highly intensive, subject specific, residential CPD programme at the National STEM Centre in York. In September 2020, the Foundation made a second £100,000 donation to continue the provision of bursaries for teachers from schools across the UK, to extend their support to cover both residential CPD, but also local, remote and online CPD where teachers are unable to travel or take time away from school. It will also fund a second ENTHUSE Partnership for a group of schools in an area close to their facility in Didcot. This will particularly focus on inspiring young people from disadvantaged backgrounds in STEM subjects - opening their eyes to the many possibilities that STEM careers can offer.

Commenting on this further commitment, Katharine Jensen, head of corporate responsibility at Vertex and executive director of the Vertex Foundation said, "The Vertex Foundation believes it is critical to invest in STEM education to inspire the next generation of innovators."

15,000 more students want a career in STEM thanks to the ENTHUSE Partnership programme. They have improved the performance of over 9,500 young people and 4,500 of the UKs most disadvantaged.
Impact Report 2020.

This will be led by Laura Deacon, who is now promoting STEM engagement and enrichment in the schools in this area, and she will be actively supported by Susanna and the Vertex team of Ambassadors. Vertex is also creating an educational laboratory at their Abingdon site which will be open to visiting schools to support and develop practical work.

This Vertex Foundation support has provided bursaries for 212 teachers to attend our immersive, residential offer, impacting the futures of over 21,000 students.

It has enabled participating primary schools to improve pupil science results 50% faster. It has seen secondary schools double the rate of progress in science GCSEs, with an increase of over 10% in the proportion of pupils achieving two good science GCSEs. Whilst in 2018/2019 schools that engaged with this intensive CPD saw 16,000 additional young people achieving grade 4 or above in at least two sciences GCSEs; and at A-level, entries into STEM subjects increased 8.5% over last 3 years, with 80% of these entries from schools benefitting from STEM Learning CPD.

With support from organisations such as Vertex Pharmaceuticals and The Vertex Foundation, we are able to continue our commitment to close the attainment gap by working with schools, teachers and young people in the UK's most disadvantaged communities. We know these partnerships make a difference.

For more information on Vertex Pharmaceuticals visit www.vrtx.com and for more information on the Vertex Foundation visit www.vrtx.com/responsibility/vertex-foundation/.

