

## **STEM Education: How to promote STEM education**

TDK-Lambda believes and understands the value and importance of supporting STEM education. Whilst these subjects are demanding and challenging to study, they can unlock and offer tremendous potential and rewards for students wishing to pursue careers in engineering and science.

In this white paper, electronics engineers and designers will find out how TDK-Lambda promotes STEM education in the South-West. Phil Scotcher, General Manager, TDK-Lambda UK, provides an overview of the many initiatives already in place in the region.

### **References**

[www.uk.tdk-lambda.com/careers](http://www.uk.tdk-lambda.com/careers)

# STEM Education: How to promote STEM education

Phil Scotcher, General Manager, TDK-Lambda UK

Our global society faces enormous challenges in the 21st century: how to deal with climate change and develop new sources of energy; restoring and improving urban infrastructure; and engineering better medicines and healthcare. Engineering institutions working together worldwide have recognised this, articulating them as a series of Grand Challenges intended as a rallying cry for engineering and scientific efforts, shining a light on the substantial opportunities and challenges impacting quality of life around the world.

To address them successfully, we must raise levels of public awareness and understanding of engineering and its underlying science. Only in this way can engineering and scientific communities positively influence policy agenda and ensure support for funding. Engineers and scientists must join with educators and policymakers to encourage, promote and deliver improved science, technology, engineering and maths (STEM) education in our schools - as well as the flow of technical information to the public at large. The UK government's recent Industrial Strategy green paper recognises many of these same issues, offering encouragement on investment in science, research and innovation, and tackling the skills gap to help people and businesses thrive.

At TDK-Lambda, we have always believed in and understood the value and importance of supporting STEM education. Whilst these subjects are demanding and challenging to study, they can unlock and offer tremendous potential and rewards for students wishing to pursue careers in engineering and science. Nevertheless, as a design and manufacturing enterprise based in North Devon, some distance from large cities and universities, attracting and retaining sufficient engineering talent can often be difficult.

We remain committed to investing in and nurturing potential young talent, helping to inspire them to become the next generation of engineers and scientists. Engineering and management staff across all

areas of our business regularly give their time to get involved with the wide range of STEM initiatives we support. Working closely with a range of organisations, we actively support and encourage young people to develop valuable technical skills throughout their studies and beyond.

As with the wider public, students often lack understanding of what engineering and science really are and what engineers and scientists actually do. Opening their eyes to the world of science and technology as early as possible is often the simplest and most effective way to encourage a lifelong interest. That is why we support The Big Bang, a programme of national and regional events for young students that celebrates science and engineering, incorporating a national STEM competition.

Along with other local businesses, we actively participate in The Big Bang Fair South West. Held at Exeter University, this annual event highlights our industry to more than 1,500 students exploring careers in STEM-related subjects. Interactive activities, live demonstrations and quizzes help engage and enthuse students, enabling them to discover how studying these subjects can lead to fantastic, rewarding careers. TDK-Lambda sponsors the award for 'STEM Club Best Project'; last year's winners were Treviglas College with a project entitled: Nature Gardens Power Generation.

Our engineers also provide mentorship and support to AS-Level students from local schools working towards their Engineering Education Scheme certificates and British Science Association CREST Gold awards. Projects at our manufacturing facility in Ilfracombe have included studying the control of ambient temperatures on the production line, calculating the facility's carbon footprint, and improving product handling within production.

We also worked with Ilfracombe Academy tutors to develop curriculum content to enable sixth form Diploma students to gain hands-on experience, developing practical skills and techniques in a real world industrial environment. This involved utilising state-of-the-art test and measurement equipment to analyse electronic components.

For those young people looking for a more direct, hands-on route, we also take on apprentices across different areas of the business. We work closely with a specialist provider of STEM apprenticeship recruitment, training and development services to North Devon manufacturers.

A-Level students from Devon schools can also access sponsorship via the prestigious Arkwright Scholarships Trust, which aims to identify, inspire and nurture future leaders in engineering. High-calibre students undergo a rigorous selection process, with successful candidates receiving a two-year package of financial support. Additional enrichment activities help increase their understanding of engineering as a whole. These include mentoring, industry visits, planned projects and work experience – all providing valuable insight into the working life of an engineer. Where possible, at the end of the programme, students receive additional support through university, before securing their first job with their sponsor after graduation.

We are also involved with a new undergraduate sponsorship scheme, in collaboration with other members of the North Devon Manufacturers Association (NDMA), including Parker Hannifin and Eaton Aerospace. The initiative enables A-Level students to receive financial support towards tuition fees when they go on to study STEM-related degrees, in addition to ongoing mentoring. The guarantee of a job with their sponsor is also an appeal for the successful graduates. Over time, we believe this will result in greater talent retention in the region.

Across all these initiatives, we aim to create opportunities for talented, driven individuals who want to pursue STEM-related careers, even when they may not have the financial means to do so. These sponsorship places will provide local job and career opportunities, while enabling us to grow the talent pool that is fundamental to the continued success of North Devon manufacturers.



For more information about medical power supplies from TDK-Lambda, please visit:  
[www.uk.tdk-lambda.com/careers](http://www.uk.tdk-lambda.com/careers)

You may also contact the author with any questions or comments at:  
[powersolutions@uk.tdk-lambda.com](mailto:powersolutions@uk.tdk-lambda.com)

***TDK·Lambda***

**TDK-Lambda UK Ltd**  
Kingsley Avenue  
Ilfracombe  
Devon EX34 8ES UK  
+44 (0)1271 856600  
[powersolutions@uk.tdk-lambda.com](mailto:powersolutions@uk.tdk-lambda.com)  
[www.uk.tdk-lambda.com](http://www.uk.tdk-lambda.com)