

# Spark their Imagination Power their future

This report explores the impact of an innovative, integrated programme to encourage young people in Wales to consider careers in Electronics and semiconductors





“It was a great day. There were a lot of presentations but hearing about the different education possibilities and careers in South Wales was important. The pupils really enjoyed the hands-on workshops and were happy taking back the development boards.”

Rhun Llwyd  
Ysgol Bro Teifi



# Spark their Imagination Programme Impact

45

Schools received  
our resources

294

Pupils attended  
Electronics events  
throughout Wales

24

Young people  
received the SPARC  
Award

## About the Programme

Spark their Imagination was designed to promote Electronics and support young people to develop the skills needed by the UK's semiconductor sector. It comprised a range of activities to help teachers to deliver engaging Electronics education, and encourage pupils aged between 15 and 19 to develop their interest.

The programme included:

- Free classroom resources and access to an online learning course
- Teacher training and professional development
- Career days for schools/students at CSA Catapult
- One-day events for pupils at universities and further education colleges in Wales
- Welsh Sparc Award for first-year undergraduates in Electronics, Computer Science or Physics, provided financial and career support to those who need it most

The programme took place between September 2023 and February 2025.

### Why this programme was needed

For the UK to take advantage of opportunities in groundbreaking areas, such as compound semiconductors, there is a need to “ensure more schoolchildren are aware of the importance and relevance of semiconductors, electronics and engineering and provide opportunities for young people to develop their interest in electronics and semiconductors through undergraduate courses and/or apprenticeships.”

Semiconductors in the UK, MTC

In 2021, just 120 Welsh pupils started Electrical and Electronics Engineering degrees at UK universities.



“The purpose of this programme is to inspire the next generation of engineers and raise the profile of our industry. We are facing a workforce shortage, so we need to have interventions in place which will educate and inform young people about the opportunities that are available to them.

This project addresses that, but also offers information and resources to teachers and schools, careers information and opportunities to hear from industry as well as education, and crucially, it offers financial support to learners who want to go on to further study.”

Alex Leadley

Skills Academy manager, CSA Catapult

## School Resources



45 schools received free Electronics resources, designed to support teachers to teach Electronics concepts in an interactive and engaging way.

These resources included:

- **Music Mixer Circuit Board** for A level Physics
- **Logic & Arithmetic Kit** for A level Computer Science
- **Arduino (microcontroller) kit** for GCSE physics, computer science or design technology

All 45 schools also received access to an online professional development course alongside the resources.



“We have received your kits and we are thrilled with them. Thank you ever so much for the opportunity to use such technology with our pupils - we really appreciate them.”

Jenna Williams

Radyr Comprehensive School

## Demystifying Semiconductors Events

Spark their Imagination reached 294 pupils through events.

160 pupils attended Demystifying Semiconductors events held at universities throughout Wales:

- Bangor University, April 2024
- University of South Wales, July 2024
- Centre for Integrative Semiconductor Materials (CISM), Swansea University, November 2024
- Centre for Integrative Semiconductor Materials (CISM), Swansea University, February 2025

- 61% of participants felt more enthused about Electronics after attending an event
- 78% of participants rated the events ‘good’ or ‘excellent’
- 17% of participants would be first in family to attend university
- 18% of participants were female

### Other events

In addition to the Demystifying Semiconductors events, the UKESF team participated in three external events at University of Wales Trinity St David, Swansea University, and Cardiff University, reaching an additional 134 pupils in Wales.



“I really enjoyed this. It was very interesting and eye opening.”

Participant at Bangor University



“It was great”

Participant at Bangor University

# Welsh Sparc Award 2024

The Sparc Award recognised 24 students who pursued Electronics or a related course in the 2024/25 academic year.

The Award aimed to help address underrepresentation and improve social mobility through its eligibility criteria, which took into account a range of diversity measures.

Award winners benefitted from:

- £1,000 bursary for their first year of university
- £1,500 Learning & Development (L&D) Bursary to be spent, towards career-related personal and professional development activities
- A mentor
- An online peer support forum
- Guarantee application for a UKESF Scholarship in the second year of university studies for all the Award recipients



- 25% of Award recipients were female
- 38% of Award recipients were first in family to go to university
- The Award winners are studying at 16 different universities



“It has been an amazing experience overall. Having benefited from the bursaries, it allowed me to pursue my education further without being limited by financial restrictions. The mentoring sessions were insightful and very informative, it opened my eyes to other opportunities and ways to develop myself.”

Abdul Hannan, Sparc Award recipient



“I have been given the opportunity to boost my skills and employability that wouldn't have been possible without the UKESF bursaries”

Georgia Howes, Sparc Award recipient





## UK Electronics Skills Foundation

We are the voice for skills in the Electronics Industry.

Through engagement with Schools, Universities and Industry, it is our mission to encourage more young people to study Electronics and to pursue careers in the sector.

We are an independent charity working to address the skills gap in the UK Electronics sector through raising awareness, promoting interest in young people, supporting the development of those who choose electronics, and building relationships to ensure a thriving sector.

This can only be achieved by working collaboratively, and to date, we have worked with more than 90 employers from across the industry, 29 of the UK's leading universities, and over 800 schools.

Find out how you can get involved in our work:

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