STEM with Wings: Cyber

Impact Report
Big Ideas | December 2025

Introduction

STEM with Wings returned for its last set of events of 2025 with a focus on cyber security and the world of engineering.

Delivered by Big Ideas on behalf of the RAF Youth STEM and in partnership with Cyber North, Cyber East and Cyber Yorkshire, STEM with Wings: Cyber connected classrooms across the UK with cyber security professionals working across the country introducing young learners to practical applications of engineering in protecting digital systems.

There were four workshops, two designed for primary school and two for secondary school students, and all aimed to show that cybersecurity is both accessible and relevant. Students explored real-world cyber threats, including phishing, impersonation, and deepfakes, while learning how cyber professionals secure businesses and services for us all. Speakers were **Melissa Gurney**, CEO, Punk Security for Cyber North, **Andrew Yeoman**, Cyber Security Consultant for Cyber East, and **Roha Raheel**, Co-Founder, Cyber Sisters for Cyber Yorkshire. These experts shared their experiences and demonstrated how engineering professionals approach problem-solving in cybersecurity. In each workshop, students had opportunities to ask their own questions, stimulating a newfound interest in cybersecurity and enabling them to interact with relatable accessible role models from the profession.

At a glance

- **7580** pupils registered, surpassing our goal of 6000 students
- **308** classes signed up
- **177** schools participated [77 Secondary Schools, 100Primary Schools)
- **Four workshops** were delivered over two days (two Primary, two Secondary)

> "The Primary 6 year group were shouting at the screen, they were engaged for the entire 50 mins, then the conversations have continued the following day. Will be doing this again if the opportunity comes up!"
>
> Primary School Teacher

> "This was a fantastic workshop, we loved the activities and the chance to pose questions."
>
> Secondary School Teacher

Objectives

The workshops were designed to:

- Increase student confidence in identifying and responding to issues of cyber security
- Inspire students to consider careers and future opportunities in STEM and cyber security
- Provide teachers with practical resources and strategies to integrate cyber security awareness into classroom learning
- Connect students with STEM professionals and role models from diverse backgrounds, so they can see they too belong in the field of cyber security

As an additional benefit is the application of cyber security insights to student behavior online - an empowerment approach to reduce online harms.

Event Highlights

Students participated in live sessions co-designed with our expert speakers and covering the work of Cyber professionals including

- Recognising phishing and scam emails
- Understanding social engineering and impersonation, particularly with AI tools
- Spotting deepfake media
- Learning practical steps to protect personal information, possibly even using the same tools hackers use, but in an ethical way, i.e using AI as a tool for good.

Interactive polls, Q&A sessions, and classroom challenges allowed students to apply knowledge and ask questions directly to the speakers. Teachers noted that students were engaged during the sessions and that fruitful relevant discussions continued afterwards.

Words that come to mind when you hear the phrase "ethical hacker"?

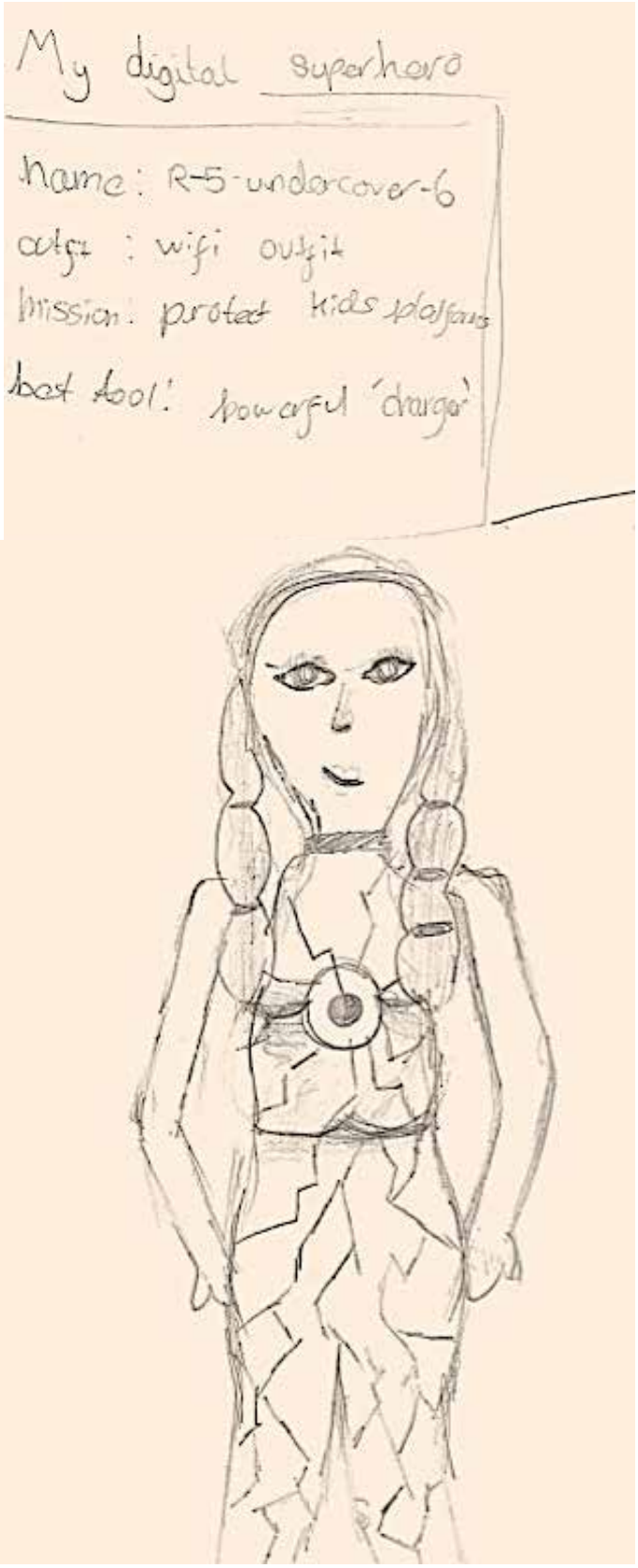
Teacher feedback:

> "My students enjoyed the workshop because it was interactive and engaging."
>
> **Secondary School Teacher**

> "We have been studying Cyber Security this term, and so a lot of the content was reinforcing what they have done in lessons, but with a real world application which was great."
>
> **Secondary School Teacher**

> "They were engaged , enthusiastic and continued the conversations back in the classroom and well into their break time. They even shared stories of their own experiences and that of their families too."
>
> **Primary School Teacher**

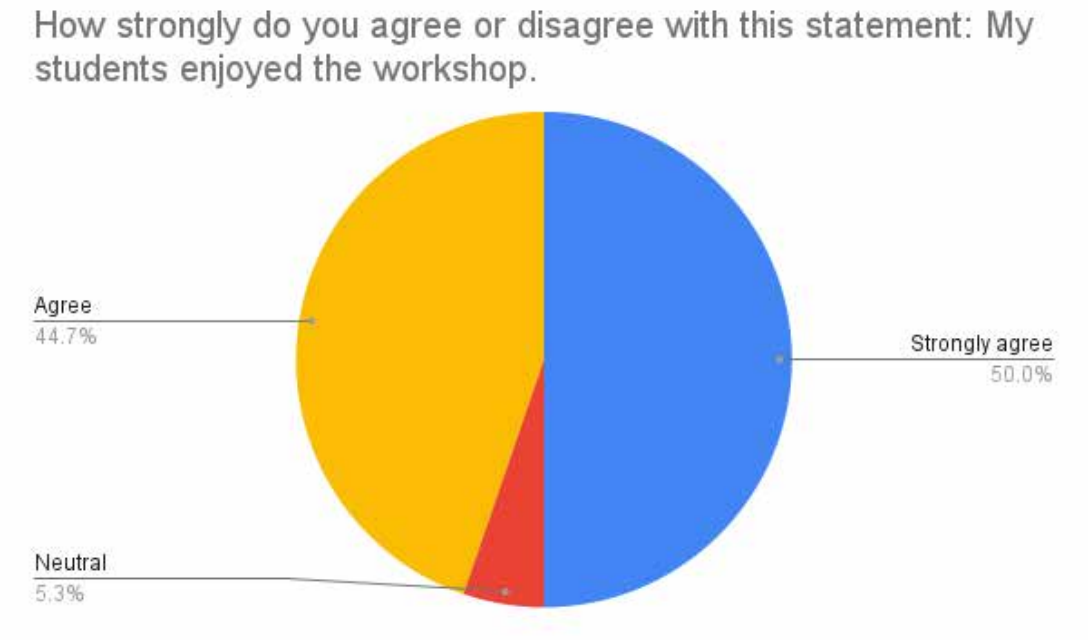
> "My girls in particular feel that they can be included in STEM, so having a woman speak was awesome for them. They very much enjoyed how they can be ethical hackers and want to solve crimes."
>
> **Secondary School Teacher**



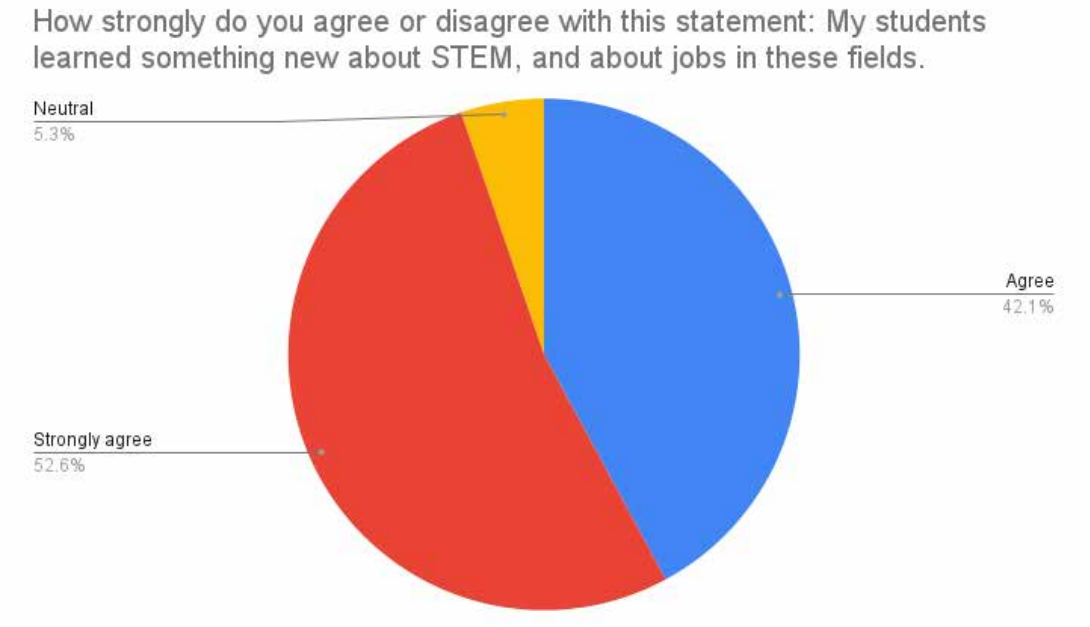
Impact

Feedback from teachers and students indicates that the workshops successfully raised awareness and confidence in cyber security concepts. Working directly with a cybersecurity professional reinforced the relevance of the skills being developed, supporting widening participation in STEM and aligning with Gatsby Benchmark 4 by linking curriculum learning to real-world practice.

Quantitative Teacher Feedback



- **92%** of teachers would like to participate in future STEM with Wings events.
- **72%** of teachers responded that they either agreed or strongly agreed that the workshop broadened their students' perceptions of who can be a STEM professional.
- **90%** of teachers agreed or strongly agreed that the workshop broadened their students' perceptions of STEM.
- **92%** of teachers reported that they would like to be invited to take part in future RAF Youth STEM opportunities.



Student questions and comments from the events:

- "Why did you choose cyber security? How did you get into the field? How long did you need to study for?"
- "What is your favourite part of your job?"

- “Thank you for this it was very informative”
- “Can you give an example of a job you and your team are working on now?”
- “Have you ever been hacked? If so, how did you deal with it?”
- “How did you train for your job?”
- “Thank you very much - this was really useful.”

In their feedback, teachers highlighted the balance between clear communication from the host and guests and interactive participation, which helped students understand complex concepts while remaining engaged.

Conclusion

STEM with Wings: Cyber successfully engaged students with relevant and practical STEM content, introducing participants to the rapidly-evolving and vital field of cybersecurity. With more than 7,000 pupils participating from 177schools and home education settings across the UK, the event offered a meaningful and accessible entry point into this important area of STEM.

As digital tools become essential to both learning and work, not all education settings have equal access to high-quality training or opportunities to meet real practitioners. STEM with Wings: Cyber helps bridge that gap. Teachers reported increased student engagement, greater awareness of online safety, and heightened interest in further STEM workshops. They also noted a broader understanding among students of who can pursue a career in STEM. For many pupils, this event marked their first interaction with a STEM professional.

The programme continues to demonstrate the impact of connecting young people with experts who can spark curiosity, deepen understanding, and build confidence in STEM pathways.

Find out more www.big-ideas.org