Royal Institution Computer Science Masterclasses with UKESF
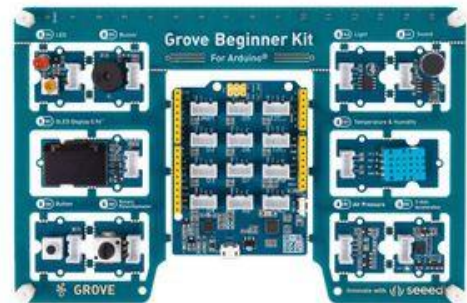
UKESF has been working with the Royal Institution to bring their fantastic masterclasses to Hampshire. The masterclasses are hands-on and interactive extracurricular sessions for KS3 pupils, led by top experts from academia and industry. They aim to enrich students' learning by demonstrating STEM subjects beyond their normal lessons.

Masterclass 1: Insight into Electronics

UKESF Scholars Alexander Mills and Tao Zeng, who are students at the University of Southampton, ran an *Insight into Electronics* session using Arduino kits. The pupils learnt about microcontrollers and sensors, and had the opportunity to programme them. The pupils created a system to measure sound and light and to detect movement. During an engaging Q&A session, Alexander Mills and Tao Zeng shared their journey into electronics and spoke about their experiences as Electronic Engineering students.

Masterclass 2: Drone Competition

In collaboration with NXP Semiconductors, UKESF Scholars Shawn Poile and Efstratios Stamatopoulos from the University of Southampton ran a drone competition. The pupils learnt about drones and programmed them to fly an obstacle course. After a few practice runs, the pupils have the opportunity to program the drone to fly autonomously through a series of challenges. The students experienced how programming for hardware can come with challenges and unexpected outcomes.

Insight into Electronics
Alexander Mills helping pupils with Arduino programming

“How Computer Science is used in actual jobs.”

“How versatile it is, you can even fight crimes!”

What has inspired or surprised you in the masterclass?

“How many different things you can achieve with Computer Science and electronics.”

...of parents said the masterclasses were worthwhile for their children.

...of pupils gave 5/5 for how much they enjoyed the masterclass.

100%

...of pupils said they are now considering a career in computer science, even if they weren't before.

...of pupils learnt about careers they were not previous aware of.

All pupils said they were at least 20% more likely to pursue a career in STEM, and some pupils said they were 60% more likely.

“Thank you running these workshops. The feedback was very positive and my child was smiling with excitement on pickup.”

Parent

“Our child is now considering computer science at GCSE and higher. The coverage of different subjects was very useful to show the breadth of opportunities available.”

Parent