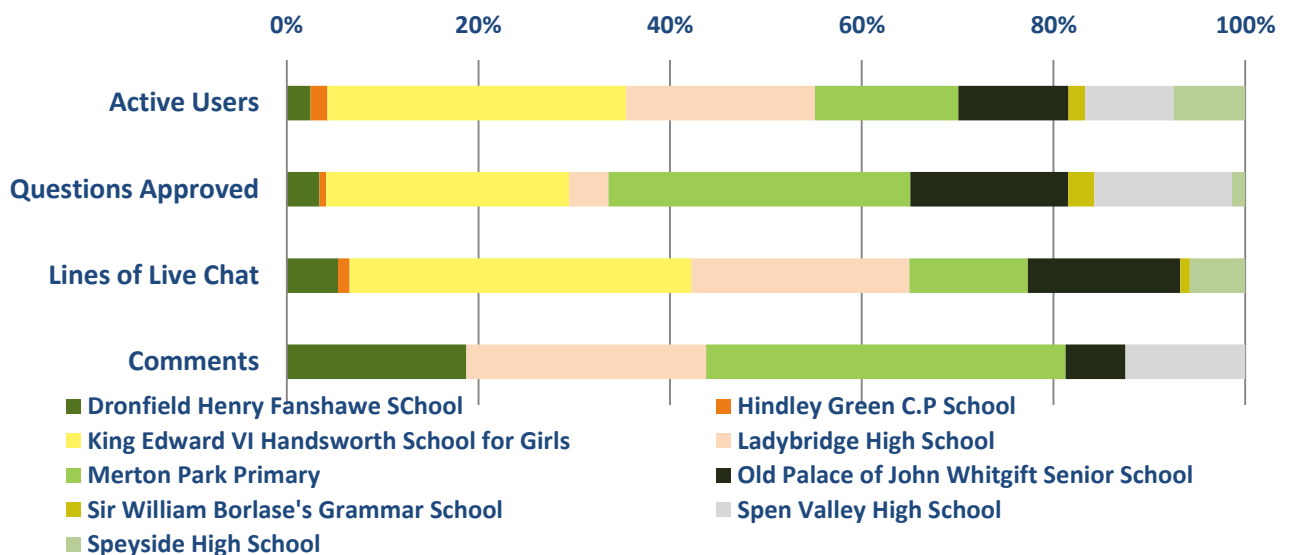


March 2016

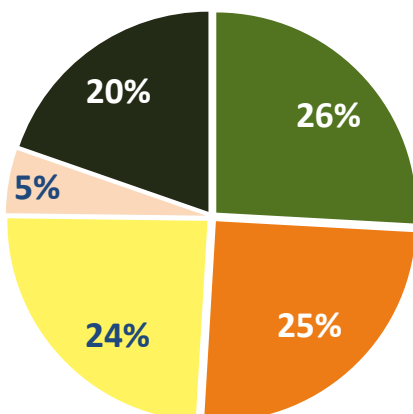
The Robotics Zone was a themed zone funded by the Royal Academy of Engineering. It involved scientists working with robotics in a variety of areas. Stuart designs tools for underwater robots, Melanie is a PhD student researching machine learning, Abbie works as Lead Engineer for the structure design on the first European Mars Rover, Tom is a PhD student who works for a robotics laboratory and Paul is an Engineering Supervisor for the Village Bakery. Questions from students were often thoughtful and intelligent, with the engineers providing detailed and engaging answers on topics such as the future of robotics and the gender balance in engineering. The zone was quite quiet in ASK with a below average number of questions submitted by the students compared to the rest of the March zones. The live chats also demonstrated that students had a good idea of the work the engineers were doing. Stuart, the zone winner, accounted for over half of all live chat by engineers.

School data at a glance

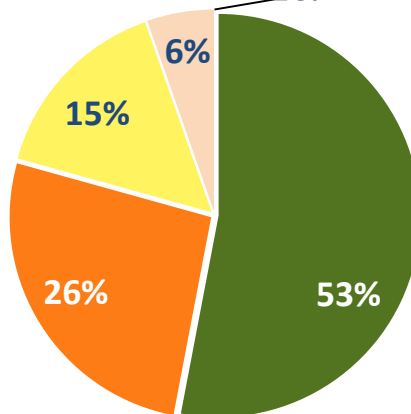


Engineer activity

Answers



Lines of live chat



Engineer	Profile views	Position
Stuart Inglis	709	Winner
Melanie Zimmer	614	2nd
Abbie Hutty	404	3rd
Tom Rooney	485	4th
Paul Webb	380	5th

Key figures from the Robotics Zone and the averages of the March zones

PAGE VIEWS	ROBOTICS ZONE	MARCH '16 AVERAGE
Total zone	15,502	16,578
ASK page	1,146	1,344
CHAT page	2,698	2,283
VOTE page	1,453	1,170

Popular topics

The event began with many general questions, with students asking about the engineers' personal interests, engineering as a subject and the day to day aspects of their jobs.

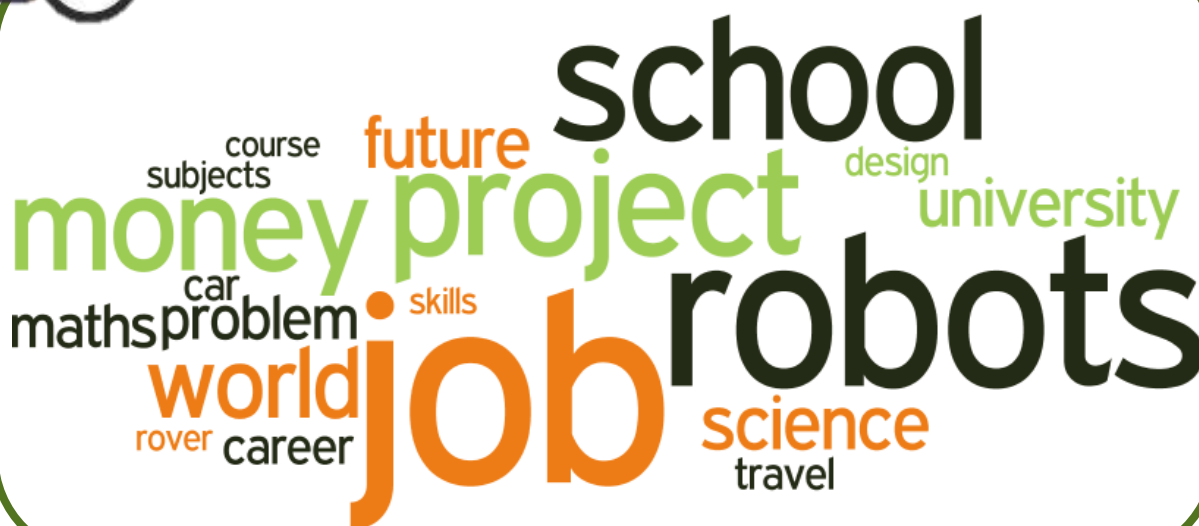
As the event progressed and the students became more aware of the engineers' individual lives work, they asked a lot more specific questions, such as Tom being asked about underwater robots and Stuart about artificial intelligence and his time in Australia. There was also interest how the engineers have benefited people's lives and whether their work has caused any harm to the planet.

The zone had quite a few questions about women in engineering, with all of the engineers discussing ways to get more women into the field. Melanie and Abbie both stressed that they have never experienced being treated differently because of their gender, but that it can sometimes be intimidating being the only female in a meeting.

	ROBOTICS ZONE	MARCH '16 ZONES AVERAGE	IAE AVERAGE
Schools	9	10	10
Students logged in	440	415	368
% of students active in ASK, CHAT or VOTE	91%	90%	85%
Questions asked	325	538	529
Questions approved	146	211	196
Answers given	371	422	425
Comments	30	31	38
Votes	368	313	285
Live chats	19	18	16
Lines of live chat	5,409	5,011	4,917
Average lines per live chat	285	280	301



Keywords from live chats in the zone, size of the word represents its popularity





Keywords of questions asked in the zone, length of bar represents frequency of use



Example Questions (click for links)

"How do you get pictures of Mars?"

"Would a drone pollute the sea if it crashed?"

"If robots more intelligent than humans are created, will they be able to create robots more intelligent than themselves?"

"What does ROV stand for?"

"Where do you get all of your materials from?"

"How did you make your drone? Was it easy or hard?"

"What advice would you give to someone who would like to follow in your footsteps?"

"How would you suggest getting more females into engineering?"

"Do you think STEM should include the arts?"

"What will be the next 'big thing' in the field of using small drones and robots in disaster situations?"

"What is the best propulsion to get humans to Mars?"

"How might your inventions of underwater robotics benefit the next generation in the future?"

"How long did it take to build the first European Mars Rover?"

"Do you take your inspiration from 20th and 21st century sci-fi for your robots?"

"Could science be affected if we leave the EU?"

"How did you build your confidence when you were shy at school?"

Examples of good engagement

Often, students would ask questions which showed they had read the engineers' profiles carefully. In one instance, Abbie received a question about her shyness, which she had alluded to within her profile, to which she gave a lengthy and extremely thoughtful and encouraging reply:

"How did you build your confidence from when you were shy at school?" – **Student**

"I was really shy when I first started school, and I think once people think you're quiet and shy, then that's really hard to break out of as they expect you to act in a certain way. So I didn't enjoy being that person, but I didn't feel like I could change – I felt trapped.

So I went to University and on my first day there was a barbeque for all the new starters to meet people and I just looked around me and realized that nobody there had any idea who I was, and what I was like, and the only way they would find out and make an opinion about me was from how I decided to act...

My advice is to find something to do that faces your fear head on, and do it. If it's with people you've never met before, even better, as they don't have any existing ideas or opinions of you, and you can just reinvent yourself into whoever you want to be. So join a new club, or group, or go to a new stage in your life like college or Uni, and just act like the person you want to be. And keep it up even when you feel shy or nervous or like you're being a big fake. If you do it for long enough it doesn't feel fake, and you stop feeling nervous, and then you'll find that you're the person you wanted to be at the start" – **Abbie, engineer**

Engineer winner: Stuart Inglis

Stuart's plans for the prize money: *"I want to create build-your-own ROV or drone kits for use with schools The kits would be designed to be constructed (and deconstructed!) by small teams of pupils incorporating mechanical, electronical and structural aspects."*



Read Stuart's [thank you message](#).

Student winner: 336rbte24

For great engagement during the event, this student will receive a gift voucher and a certificate.

Feedback

We're still collecting feedback from teachers, students and engineers but here are a few of the comments made during the event...

"Thank you all for this today. My kids have really enjoyed this 😊" – **Teacher**

"Thank you for talking to us we learnt a lot" – **Student**

"It is great to get to know the students better - and when you're told that they think what you do is great and they would like to be an engineer... that's worth more than anything!" – **Melanie, engineer**