



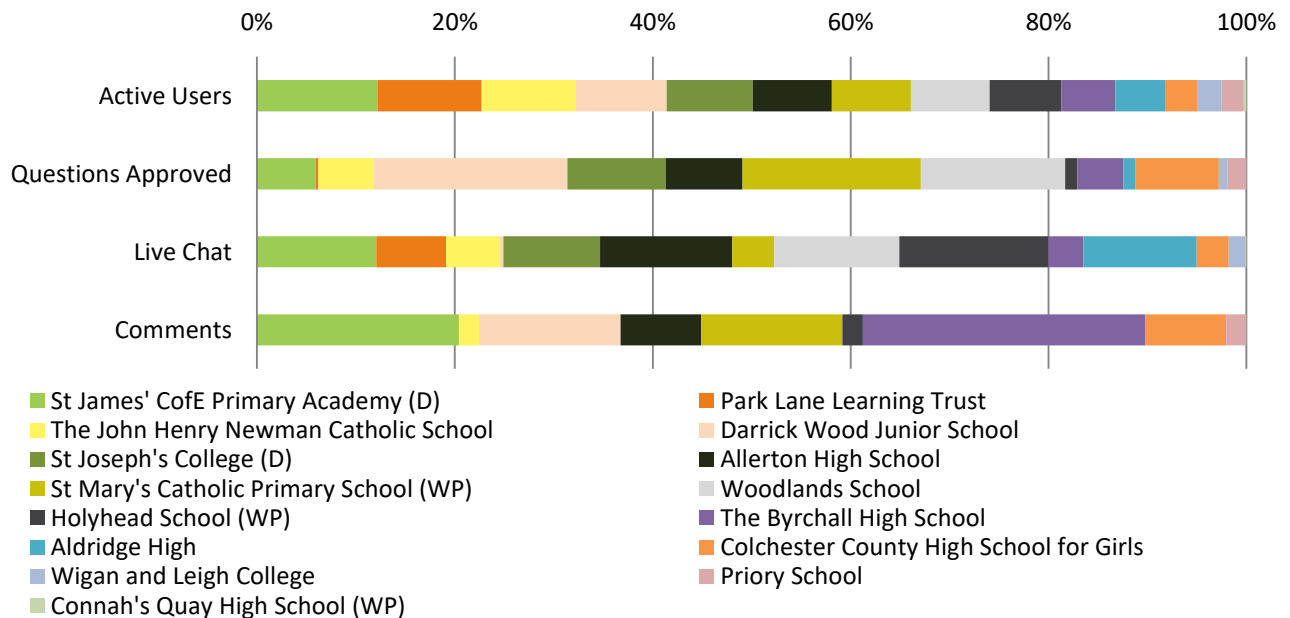
June 2017

The Candela Zone was a general engineering zone, funded by the Royal Academy of Engineering's Ingenious Grant. Yetty is a PhD student researching how to bring faster data speeds to smart devices, Tom manages the training of engineers using underwater acoustic systems and Laura is a controls engineer for an Air Handling Unit manufacturer. Jack designs cryogenic tanks which store energy from cow poo, Gina – the winner in this zone – leads a manufacturing team that builds and tests video cameras and Chris is a PhD student using materials like graphene to treat degenerative diseases.

All of the engineers were great at engaging with the students and Live Chats were very friendly and personable. There was a lot of interest in becoming and working as an engineer, as well as other STEM careers with students often asking for advice on certain career paths.

Gina and Tom were especially good at building a rapport with students, by telling jokes and finding common interests to relate to each other with. In particular, Gina was great at being open with students on her profile and in the ASK section, for example in [this conversation with students about her sexuality](#).

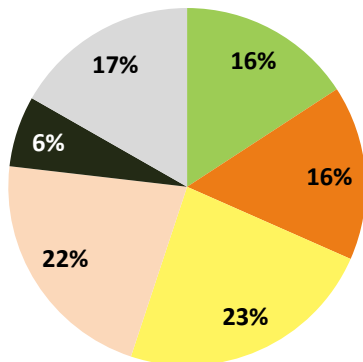
School data at a glance



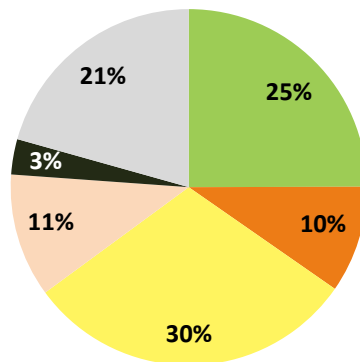
We want to increase the participation of under-represented groups going into STEM careers. Find out what we mean by our Widening Participation (WP) and distant from a major research HEI (D) schools, and how you can support us in working with more of these at about.imascientist.org.uk/widening-participation.

Engineer activity

Answers



Live Chat



Engineer	Profile views	Position
Gina Schade	1,378	Winner
Christopher Bullock	908	2nd
Tom Rooney	1,139	3rd
Yetunde Kolawole	1,095	4th
Jack Irwin	854	5th
Laura Walker	1,049	6th

Key figures from the Candela Zone and the averages of the June zones

PAGE VIEWS	CANDELA ZONE	JUNE '17 ZONES AVERAGE
Total zone	26,679	25,595
ASK page	1,680	1,666
CHAT page	2,889	3,192
VOTE page	1,670	1,788

	CANDELA ZONE	JUNE '17 ZONES AVERAGE	IAE AVERAGE
Schools	15	15	11
Students logged in	539	511	401
% of students active in ASK, CHAT or VOTE	76%	82%	85%
Questions asked	729	675	608
Questions approved	322	292	226
Answers given	639	531	453
Comments	76	61	45
Votes	349	338	299
Live chats	18	19	17
Lines of live chat	5,793	5,979	5,371
Average lines per live chat	322	315	313

Popular topics

Lots of the questions in ASK focussed on the engineers' day to day life at work, with students asking about the equipment they use, whether they travel with work and how often they have to work in an office.

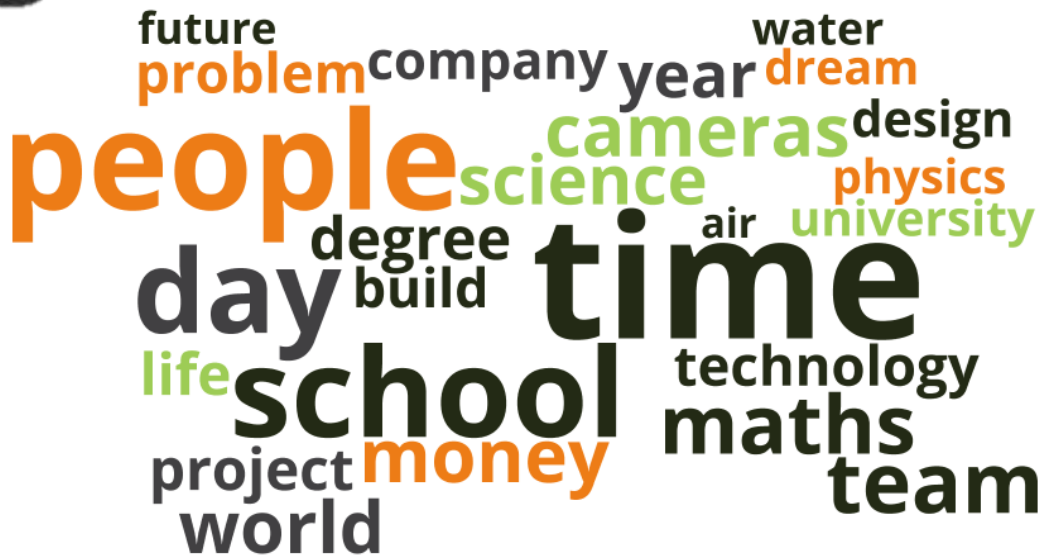
Students wanted to know how stressful they found work, whether Chris found it difficult splitting his time between Manchester and Barcelona and about Gina's time working in Hong Kong.

Students were particularly interested in inventing and the different things the engineers had created. They were able to relate to Yetty's research into creating faster data speeds and wanted to know about the different things she was hoping to improve through this. They wanted to know about how fibre optics work and whether her work will allow more places to offer free Wi-Fi. Students also asked about Gina's work making cameras and how Chris was using graphene to treat diseases.

All the engineers were happy to talk with the students about both their work and personal lives. They answered questions about their salaries openly and gave honest advice to students considering a STEM career. Many students asked the female engineers what it was like to be a woman working in their industries. There were also good conversations about their lives outside of work, with students asking about their hobbies, relationships and favourite foods and films. There were questions about the engineers' experiences at school, including their favourite and least favourite subjects, what grades they got and whether they ever got into trouble.

Chat

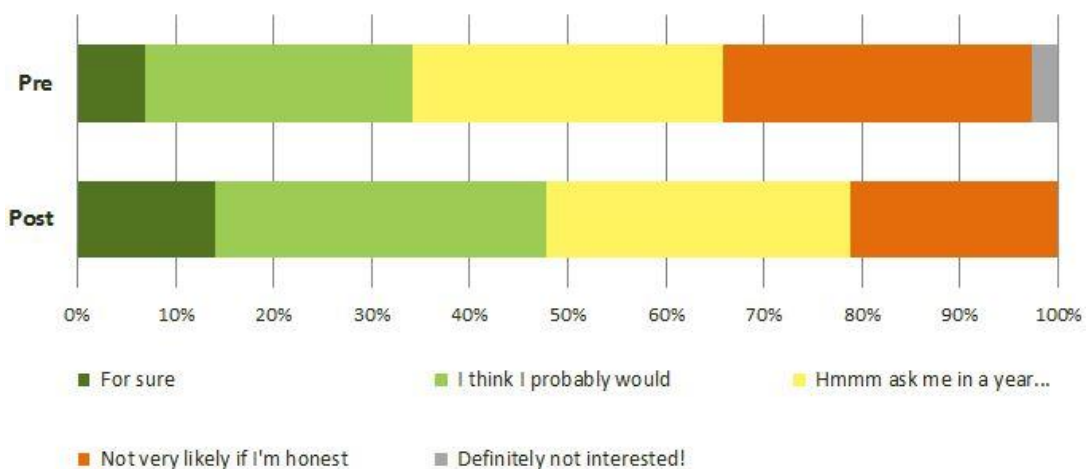
Keywords from live chats in the zone, size of the word represents its popularity



Students' attitudes to STEM

We ask students directly about how they feel about STEM, before and after taking part in the event. It's clear that participating in *I'm an Engineer* has an overall positive effect on students' attitudes to STEM:

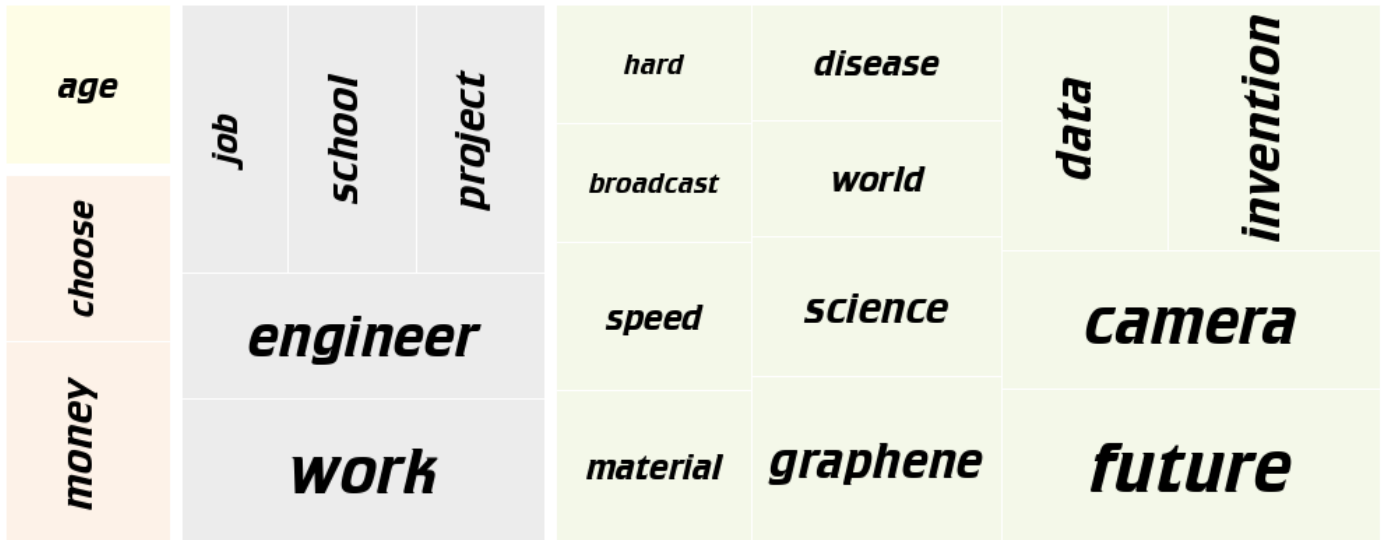
Would you like to work as an engineer in the future?



Figures are averages from *I'm an Engineer* Zones run between November 2014 and June 2015. We're still collecting feedback for June 2017, but expect to see a similar positive change.

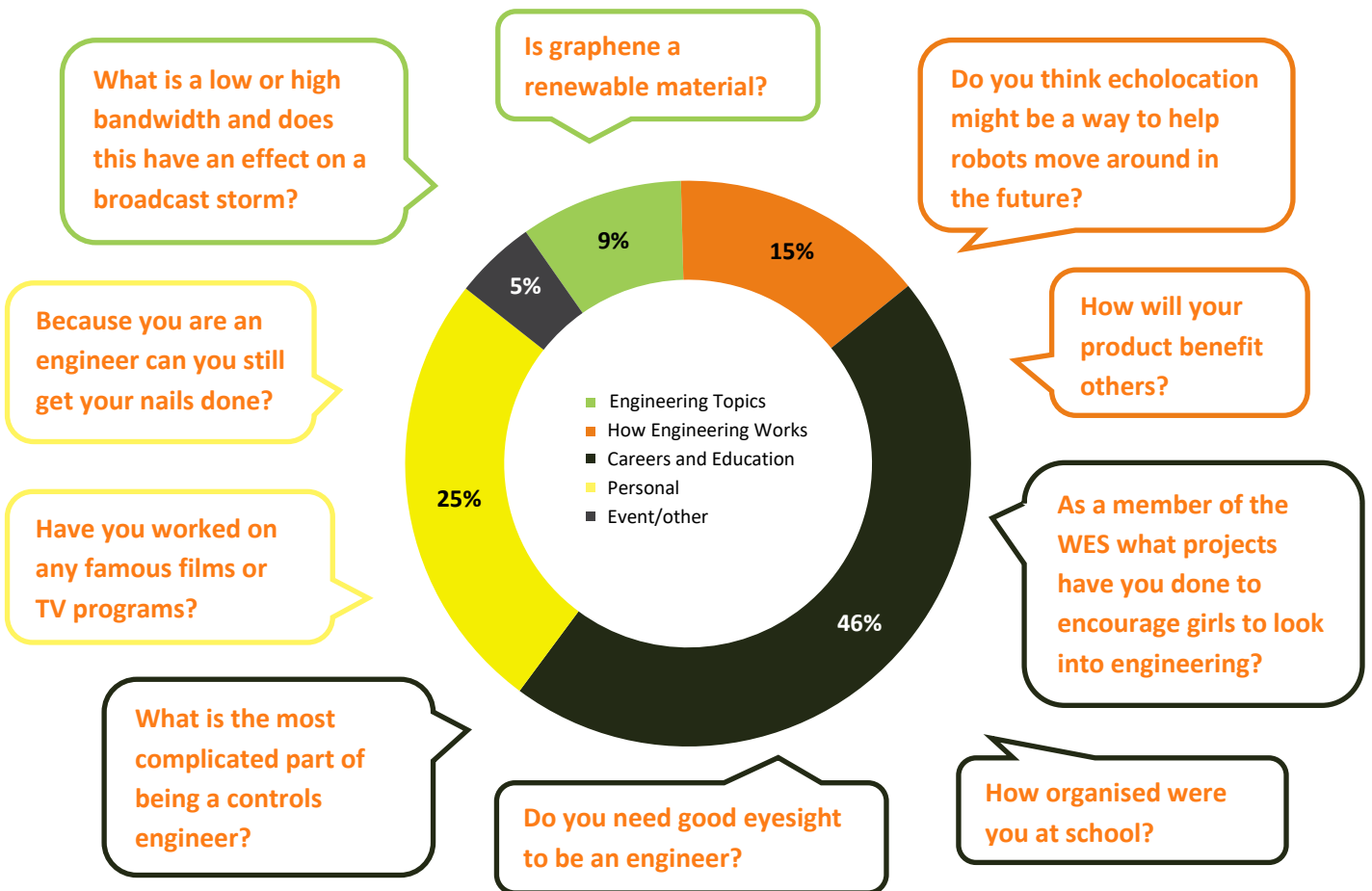


Top Keywords of questions approved in the Zone
Area represents frequency of use, colour represents category



■ Motivation
 ■ Careers and Education
 ■ Engineering topics
 ■ Other

Question themes and example questions in the Zone
(click for links)



Find out about how we've coded the questions at about.imascientist.org.uk/2017/student-question-coding

Examples of good engagement

Students asked engineers specific questions showing they had read their profiles, such as this in exchange about Gina building contraptions in school:

“What did you build from your pencil case in lessons at school?” – **Student**

“I once built a mini cross bow with pencils and rubber bands, there are lots of things you can come up with with rubber bands. I even made a sort-of catapult once (it didn't launch things very far... and I got in trouble)”
– **Gina, engineer**

The engineers were all good at explaining their work to students:

“What is graphene?” – **Student**

“It's a new material that is made of single-atom sheets of carbon. It is the thinnest, strongest and most electrically conductive material” – **Chris, engineer**

“How exactly would you use graphene in medicine?” – **Student**

“There are lots of potential applications. Personally I use it to build electronic devices that get implanted into the brain. The main advantages of graphene are that it has really good electrical properties, chemical stability and it is biocompatible (the body responds well to it)” – **Chris, engineer**

“That is a very good answer. Thank you” – **Student**

Engineer winner: Gina Schade

Gina's plans for the prize money: *“I would invest the money into the educational outreach programmes we run at Sony. An example of one of the educational programmes we support is the Engineering Education Scheme Wales – a non-profit, educational charity which aims to inspire and motivate young people to choose a career in STEM.”* Read Gina's [thank you message](#).



Student winner: DG

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...

“I think this is a fantastic event, I've been involved with the science festival and most of the young people that come don't ask questions. I love that this gives the students a chance to ask all their questions.” – **Engineer**

“My class thought engineers were men at the start of the project! They don't anymore! Brilliant opportunity.” – **Teacher**

“Before I thought engineering was just inventing stuff but after participating in I'm an Engineer, I have learnt that engineering also involves research, investigating and experimenting. Asking questions to the engineers was particularly helpful as I got a better understanding of their jobs and whether it is something I should think of becoming in the future.” – **Student**