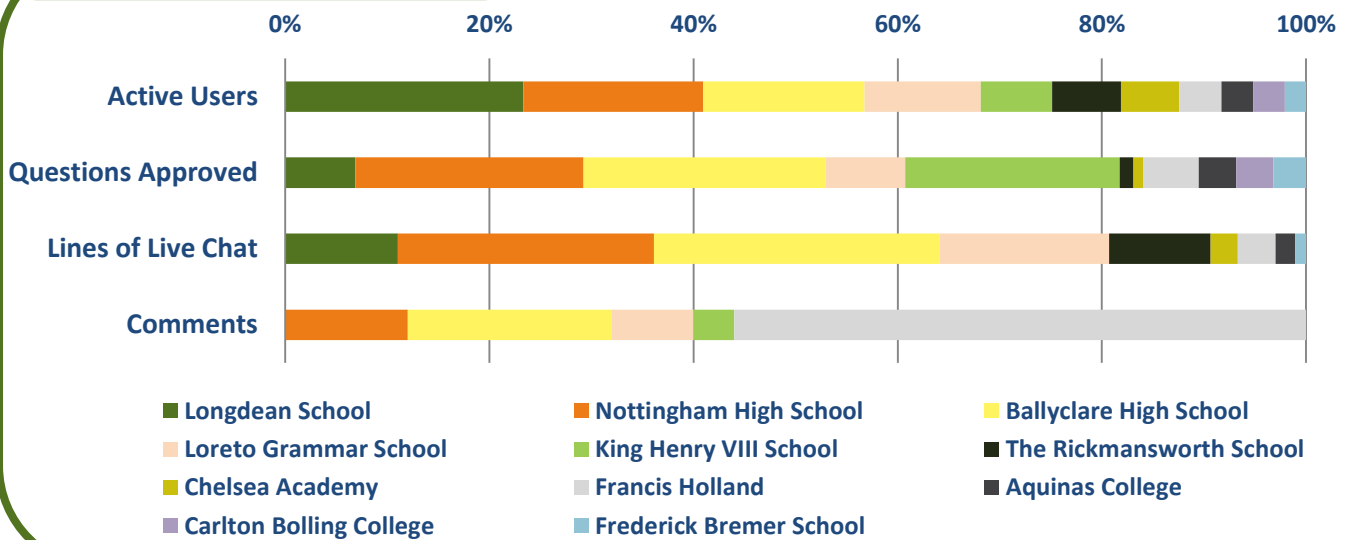




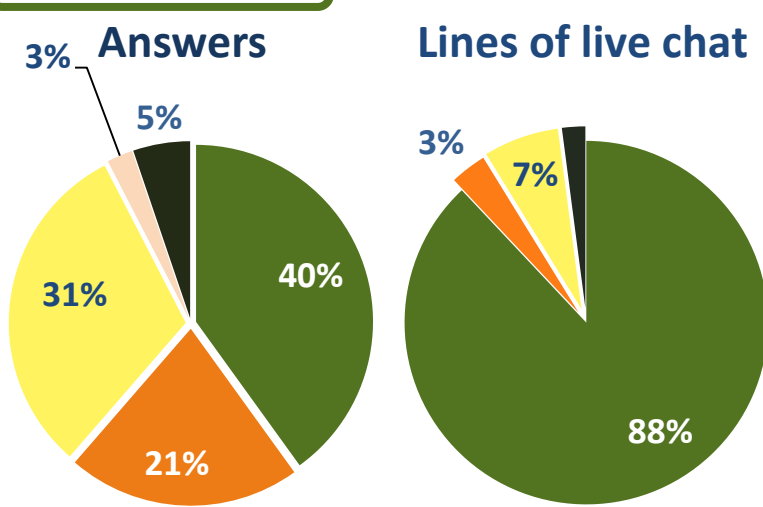
June 2015

The Artificial Body Zone was a themed zone funded by the Wellcome Trust. It involved engineers who work with technology that could replace or support non-functioning body parts and organs, covering areas like jelly inserts for the spinal column, cochlear implants, and 3D printing bones. Topics discussed in the zone were a mixture of general discussion about engineering as a career and the work being done by the participating engineers. Lizzie, who won the zone, was very dedicated, only missing one live chat during the event.

School data at a glance



Engineer activity



Engineer	Profile views	Position
Lizzie Kapasa	1,171	Winner
Yu Chuen	826	2nd
Andrew Phillips	620	3rd
Sonia Ramos Pascual	876	4th
Nicholas Hitchens	745	5th

	ARTIFICIAL BODY ZONE VIEWS	JUNE '15 ZONES
Total zone	19,292	19,241
ASK page	1,467	1,490
CHAT page	3,163	3,100
VOTE page	1,636	1,437

	ARTIFICIAL BODY ZONE	JUNE '15 ZONES AVERAGE	IAE 2012-15 AVERAGE
Students	452	413	356
% of students active in ASK, CHAT or VOTE	87%	87%	83%
Questions asked	654	727	518
Questions approved	219	229	195
Answers given	422	455	435
Comments	40	27	41
Votes	336	311	277
Lines of live chat	4,630	5,574	4,896
Live chats	19	19	16
Average lines of live chat	244	290	305
Schools	11	11	9

Popular topics

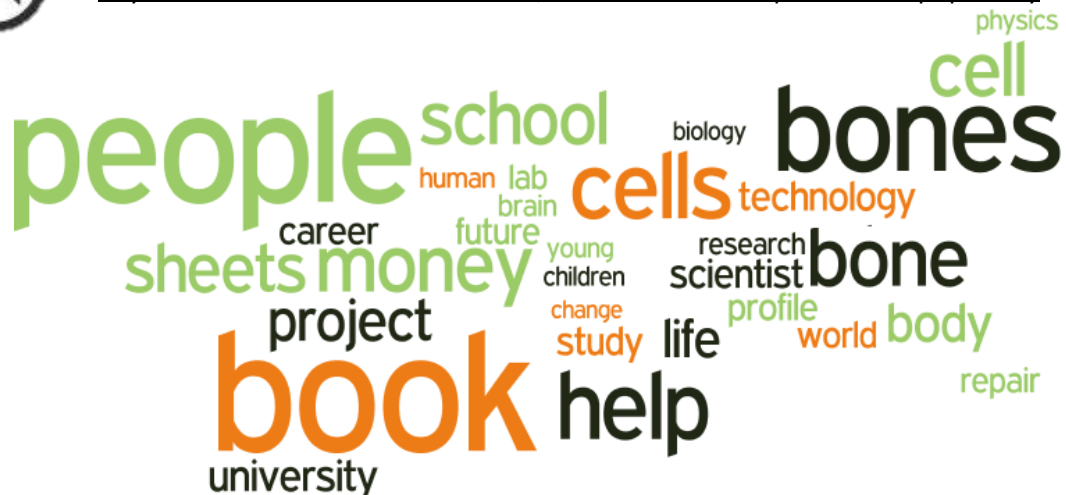
Many of the questions in ASK were about what engineering entails, how the engineers became interested in it and about what the career of an engineer is like.

Questions on the theme of artificial body parts focused on the specific areas of work of the engineers. Of these the students were most interested in bones, spines and implants, reflecting the work of Lizzie, Chuen, Sonia and Andrew. The students also wanted to know how the work of the engineers would help people and what might be possible in the future.

There was also much interest in the issue of gender diversity (or lack of) in engineering and how women feel about working as an engineer. Often Lizzie was the sole engineer present in a live chat and she answered many questions on this topic. The students were also very interested in her plan to publish a children’s book about engineering, which related to the topic of female representation.



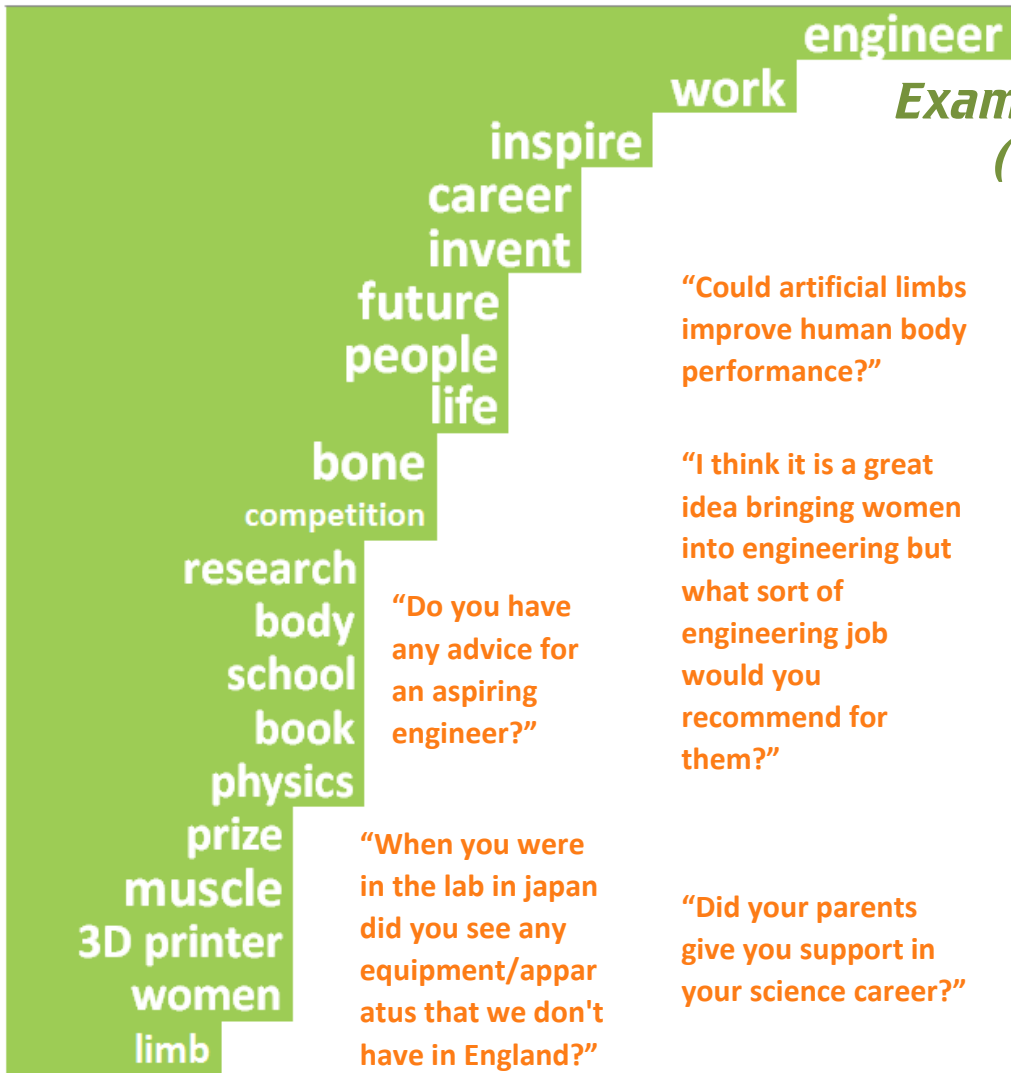
Keywords from live chats in the zone, size of the word represents its popularity





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

0 2 4 6 8 10 12 14



Example Questions (click for links)

“Could artificial limbs improve human body performance?”

“When do you think that people will have jetpack artificial legs?”

“I think it is a great idea bringing women into engineering but what sort of engineering job would you recommend for them?”

“How did you come up with the idea of layering cells?”

“Do you have any advice for an aspiring engineer?”

“When you were in the lab in japan did you see any equipment/apparatus that we don't have in England?”

“Did your parents give you support in your science career?”

“Do you think more women should be in the world of engineering? Do you think it is unfair that there are not enough women?”

“Have you changed anybody's lives in career? How?”

“What's the difference between the way you're trying to heal bones and the way doctors do it now?”

“Who came up with the idea of making artificial body parts?”

“If no inventions existed (I really mean nothing) and you could only invent one thing, what would it be and why?”

“What will you be able to do in 5/10 years that you can't do now?”

“What is the smallest thing you have seen down the microscope?”

“When will cell sheet technology be available?”

“If you guys could salvage one of Archimedes' inventions, and make it fully operational, what would it be?”

Examples of good engagement

Cheun was very popular in the chats and he shared interesting insights into his work that also showed his personality to the students:

"I've noticed that you liked art, would you say that helps you in your workplace?" - Student

"Art helps because it allows me to visualise what I see from the text books and correlates that with what I see during surgery. But also it's something I enjoy doing" – Chuen, engineer

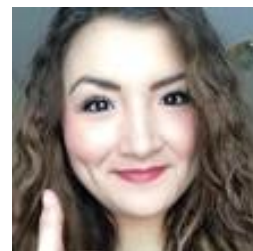
Lizzie was adept at giving well thought out responses to the many questions about her book, demonstrating she had fully thought out her plans, and could empathise with views of the students:

"How do you think your book can change the views about women in engineering?" - Student

" Well there is Suzie & Ricky so boys and girls can associate with both, but Suzie is a bit more of the star of the show than Ricky. Also, there are 6 engineers they meet - 3 are women and 3 are men. The project leader is Anna the Aerospace engineer so she's a woman too. So subtly we are giving them a presence without totally dominating and putting off any boys." – Lizzie, engineer

Engineer winner: Lizzie Kapasa

Lizzie's plans for the prize money: *"So far we, Women in Engineering, have written a children's book about engineering and we're just about to publish it. Currently we only have enough money to give out free books to local schools in Sheffield. It would be amazing if we had more money to make this project national and maybe even available online as an e-book. It has great potential to be the first book in a series that could also be linked to websites and apps related to the book. Although all this needs funding!".* Read Lizzie's [thank you message](#).



Student winner: Stephen

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...

"This has shown me a lot about a field I never knew about. It's so interesting!!" – Luke, student



Andrew Phillips
@atmphilips

Great questions on the @IAEGMOOH artificial body zone
artificialj15.imanengineer.org.uk



Elizabeth Kapasa
@ElizabethKapasa

GREAT AMAZING FANTASTIC chats with Year 7 & 8 at Rickmansworth School!