



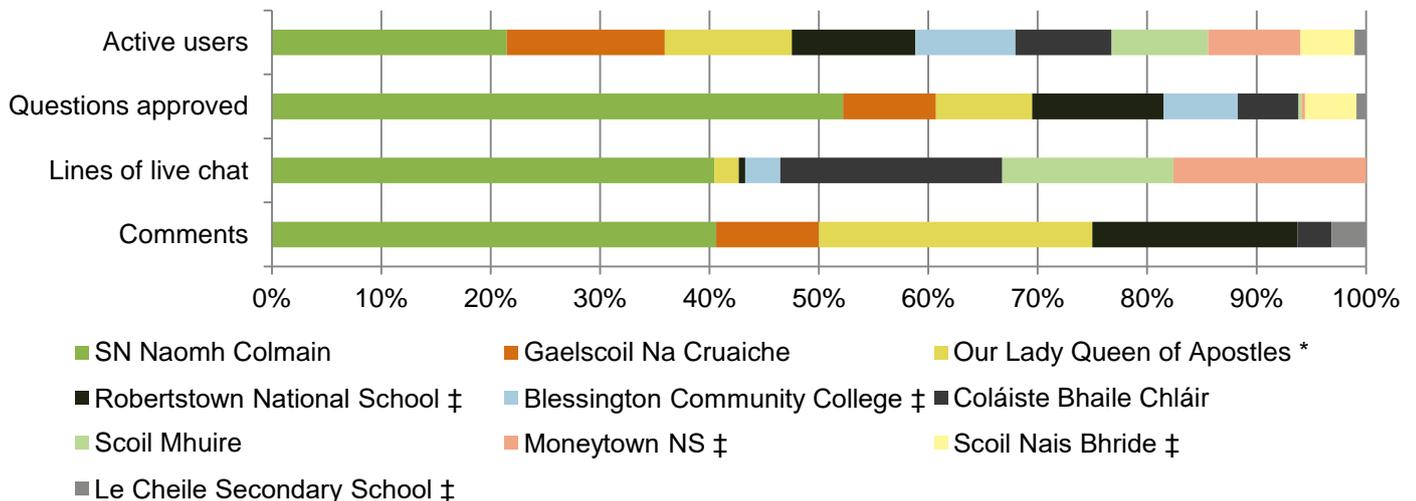
February–March 2018

This event was quieter than expected due to bad weather causing many schools across Ireland to close during the first week of the event. The disruption meant that teachers had to cancel lessons they had planned to run on I'm an Engineer. In total, sixteen chats had to be cancelled across the event with many teachers unable to rearrange. This caused our averages across the event to be a lot lower than in previous years.

The Health Zone was a themed zone supported by Wellcome.

- Pattie is a PhD researcher looking at how stretching stem cells in blood vessels can keep them
- Karl works for MSD creating new medicines for patients
- Ivor studies how bone cells sense when we are walking and what happens in conditions such as osteoporosis
- Fiona, the winner of this zone, is a postdoctoral researcher using 3D printing to design new bone implants
- Eoin is a PhD student studying the heart and designing new medical devices that help with heart disease

School data at a glance

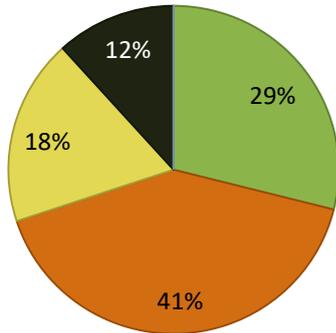


We want to increase the participation of under-represented groups going into STEM careers. Priority schools are noted above. Read more at about.imascientist.ie/2016/widening-participation/

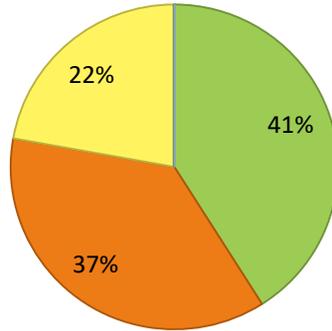
DEIS schools in SFI target counties (*), other DEIS schools (‡), and other non-fee-paying schools in target counties (‡).

Engineer activity

Answers



Lines of chat



ENGINEER	PROFILE VIEWS	POSITION
Fiona Freeman	621	Winner
Eoin McEvoy	676	2nd
Ivor Geohegan	499	3rd
Pattie Matthieu	595	4th
Karl Brennan	490	5th

Key figures from the Health Zone and the averages of the February – March zones

PAGE VIEWS	HEALTH ZONE	FEB–MAR '18 ZONES AVERAGE
Total zone	13,408	10,023
ASK page	1,591	977
CHAT page	1,014	874
VOTE page	1,063	830

	HEALTH ZONE	FEB–MAR '18 ZONES AVERAGE	IAE 2014-18 AVERAGE
Schools	10	9	11
Students logged in	357	265	402
% of students active in ASK, CHAT or VOTE	80%	79%	85%
Questions asked	503	294	593
Questions approved	339	193	223
Answers given	256	226	436
Comments	34	17	44
Votes	210	162	298
Live chats	14	13	17
Lines of live chat	2,142	1,858	5,369
Average lines per live chat	153	148	309

Popular topics

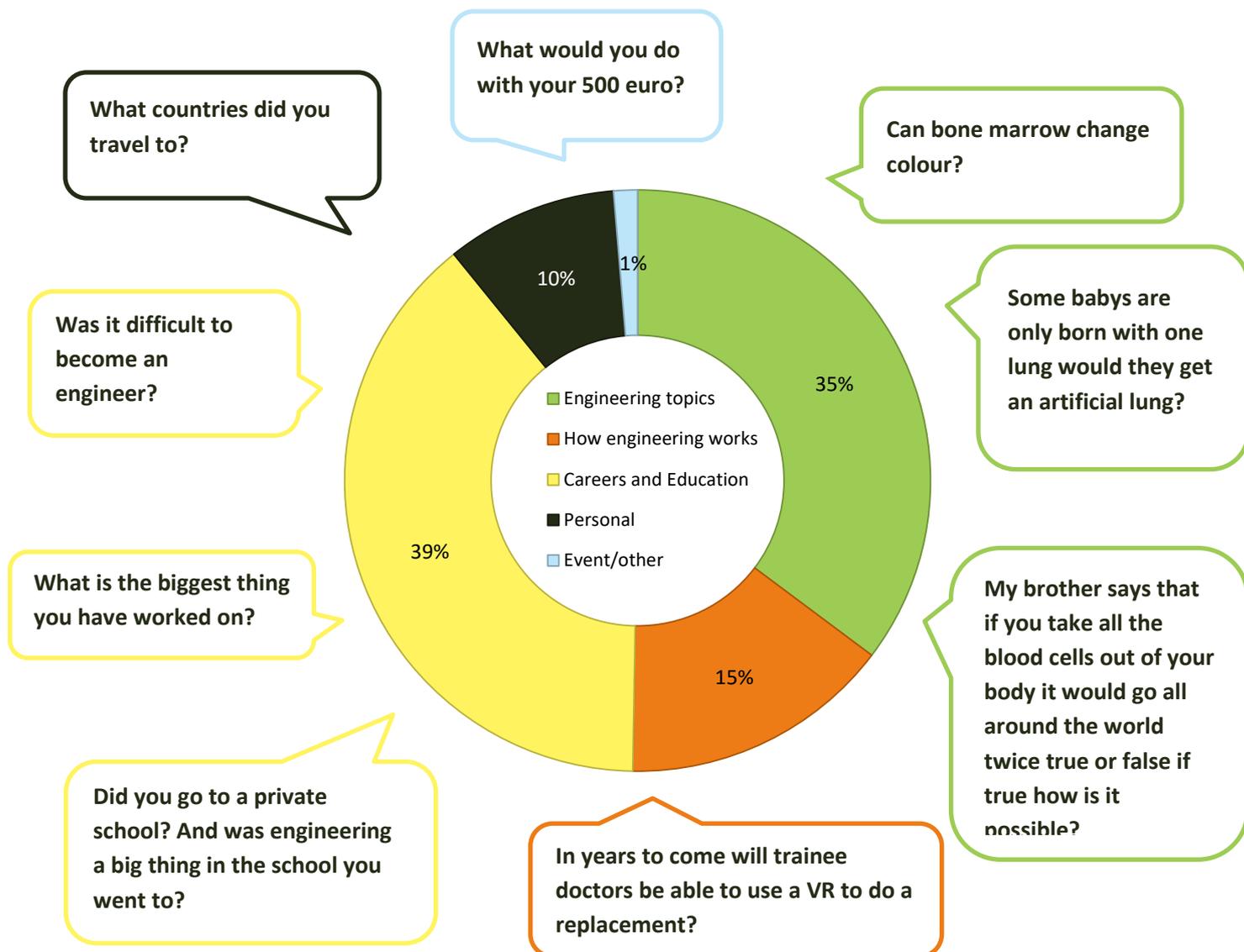
Students often asked questions relating to themselves or people they know, increasing their science capital. For example, one student whose cousin has cystic fibrosis asked whether it's possible for them to have a replacement lung. Another told the scientists about his mum who had taught someone with artificial arms and legs, and asked what these are made from. Generally, students asked lots about how and why bodies work the way they do.

They were interested in the work of the scientists and their individual research areas. Pattie was asked about stem cells, how she stretches them, what she does if they don't stretch and her opinions on the future of stem cell research. Eoin was asked general questions about how the heart works, beats and looks, as well as his work on artificial hearts and whether people could have an artificial heart transplant in the future instead of having to wait for a donor. Fiona was asked a lot about 3D printing including what the easiest and hardest things are to print, as well as how 3D printers work and are made.

Students wanted to know what it was like to be a biomedical engineer, what grades you needed and what University courses were available.

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 wanted to know how the engineers carry out their research and the processes they use, such as Pattie's work stretching cells. Pattie was great at explaining a complicated topic in a simple way.

"What machine would you use to stretch a living cell?" – Student

"You use a device called a bioreactor. There are many types of bioreactors, but to stretch cells, you have to have two important parts. You need a stretchy surface for the cells to attach to, and then you need something to stretch that surface. I use two different bioreactors. The first grips the surface and pulls it. The second uses a vacuum to pull at the surface and make it stretch." – Pattie, engineer

Many students asked questions about themselves and their families, asking the scientists about genetics and information that they could relate to their own lives:

“I have red hair. None of my brothers mam or dad have red hair. How is it possible how do I have a gene for red hair?” – Student

“The short answer is that both your parents have a red hair gene, but they don’t have red hair because their second gene is stronger (more dominant). If this happens with parents, there is a 25% chance that one of their children will get 2 red hair genes, and then have red hair (you!). In other words, if they had 4 children, most likely one of them would have red hair.” – Eoin, engineer

“Well that solves that.... I always wondered if I was adopted!!!!” – Student

Scientist winner: Fiona Freeman

Fiona’s plans for the prize money: *“I’d like to use the money to organise an outing for schools to go to the science gallery to help encourage more girls to be interested in Science.”* Read Fiona’s thank you message.



Student winner: E205

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 scientists but here are a few of the comments made during the event...

“The engineers were amazing 😊 answered every question! can't wait for next year! great program” – Student

“It is rare that you can reach out to so many students ... It is also in a casual setting so both you and the students are relaxed which always leads to easier conversations.” – Fiona, engineer