

February–March 2018

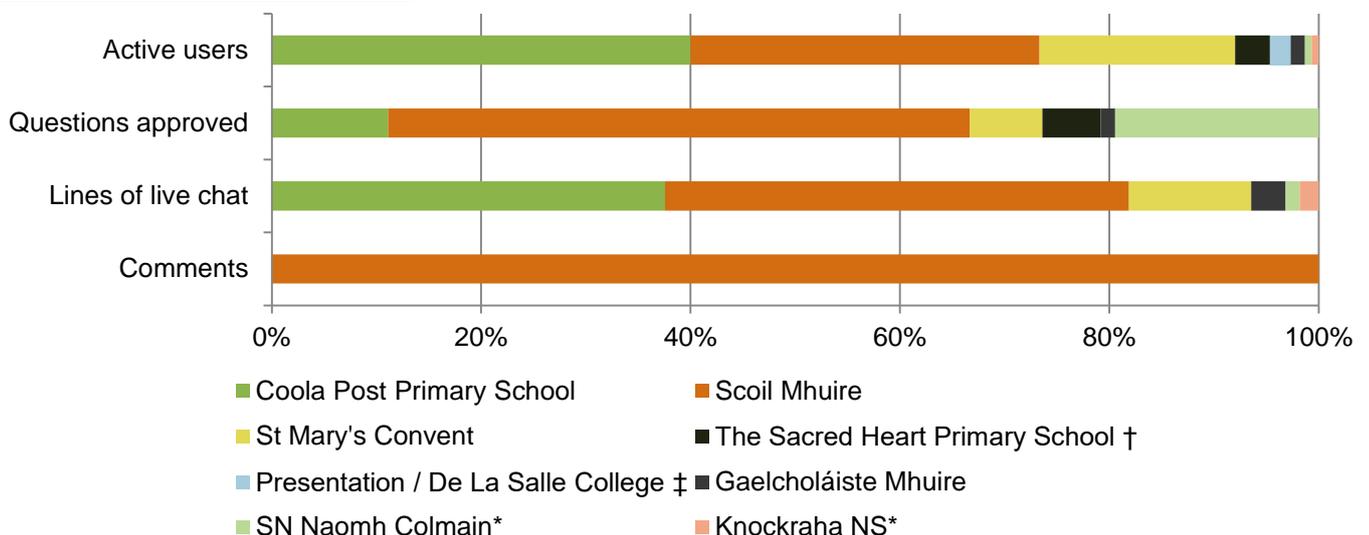
This event was quieter than expected due to bad weather causing many schools across Ireland to close during the first week of the event. The disruption meant that teachers had to cancel lessons they had planned to run on I'm an Engineer. In total, sixteen chats had to be cancelled across the event with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

The Robotics Zone was funded by Science Foundation Ireland, with five engineers working in different areas of robotics engineering.

- Patrick is a PhD student researching robot manipulation
- Graham, the winner of this zone, is an oceanographic engineer looking at data from buoys in the ocean
- Dino is working on robots that can be controlled by voice commands and virtual reality
- Cara is developing a robot companion to keep children calm when they have to go into hospital
- Aisling is studying how computers work and how we create and translate what they have to say.

This was the quietest zone in this event with the lowest number of students logging in and questions in Ask. We assigned places to 14 schools, but only were six able to take part because of the weather disruption. Some teachers did hand out login cards so interested students could log in from home and use ASK section, and three students made use of the evening chat for families on the final Thursday.

School data at a glance



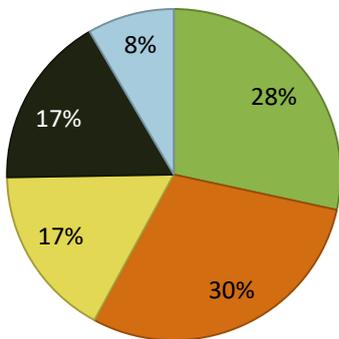
We want to increase the participation of under-represented groups going into STEM careers. Priority schools are noted above. Read more at about.imascientist.ie/2016/widening-participation/

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

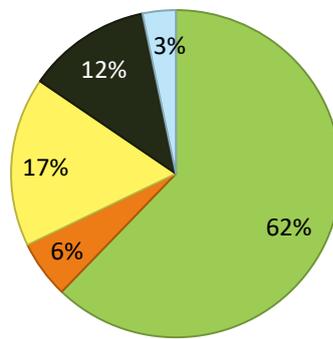
*Students were able to join other zones than their own to join open live chats and ASK questions. Students at these schools joined from other zones in this event.

Engineer activity

Answers



Lines of chat



ENGINEER	PROFILE VIEWS	POSITION
Graham Cullen	297	Winner
Cara O'Brie	253	2nd
Aisling Lee	204	3rd
Patrick Lynch	279	4th
Dino Omerdic	209	5th

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

PAGE VIEWS	ROBOTICS ZONE	FEB–MAR '18 ZONES AVERAGE
Total zone	6,059	10,023
ASK page	355	977
CHAT page	728	874
VOTE page	520	830

	ROBOTICS ZONE	FEB–MAR '18 ZONES AVERAGE	IAE 2014-18 AVERAGE
Schools	8	9	11
Students logged in	183	265	402
% of students active in ASK, CHAT or VOTE	82%	79%	85%
Questions asked	91	294	593
Questions approved	60	193	223
Answers given	95	226	436
Comments	2	17	44
Votes	104	162	298
Live chats	11	13	17
Lines of live chat	1,850	1,858	5,369
Average lines per live chat	168	148	309

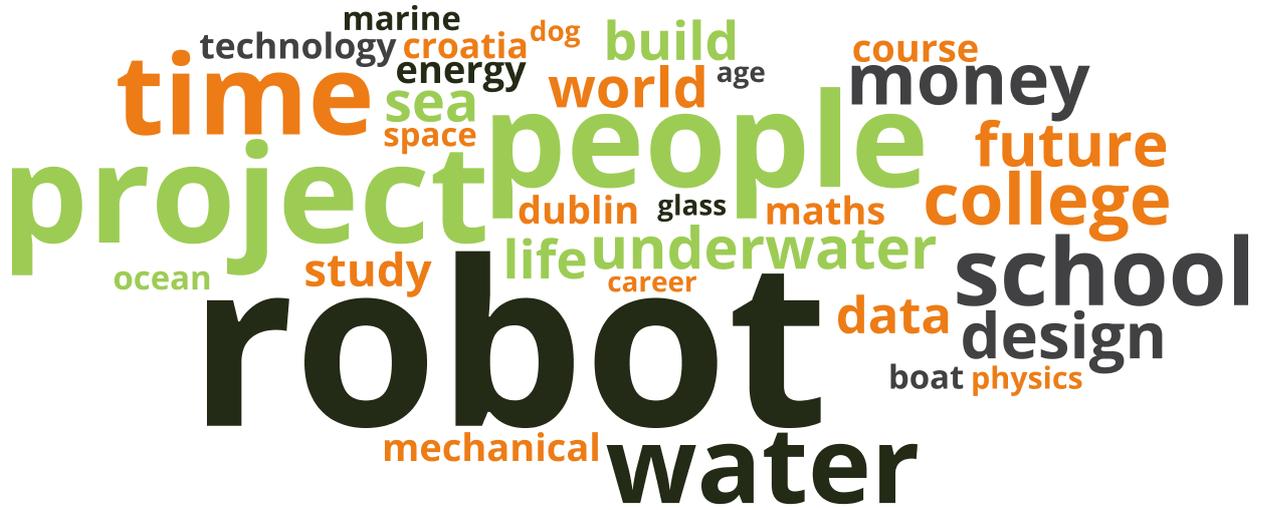
Popular topics

Although the zone was quiet, many questions were thoughtful and on topic. Lots of students asked about robotics and how robots could be used to improve our lives, such as helping the elderly with cooking and cleaning. They were interested in the future of the robots the engineers were working on, for example asking Patrick about the people who could use the robot arms he is making and how they could help.

Almost two thirds of the questions in Ask were careers or education focussed. Students showed a lot of interest in becoming an engineer, asking about the grades needed and whether the engineers had any advice for them. They wanted to know about their day to day experiences, including what tools they use, how they deal with pressure at work and what the best things about their jobs are.

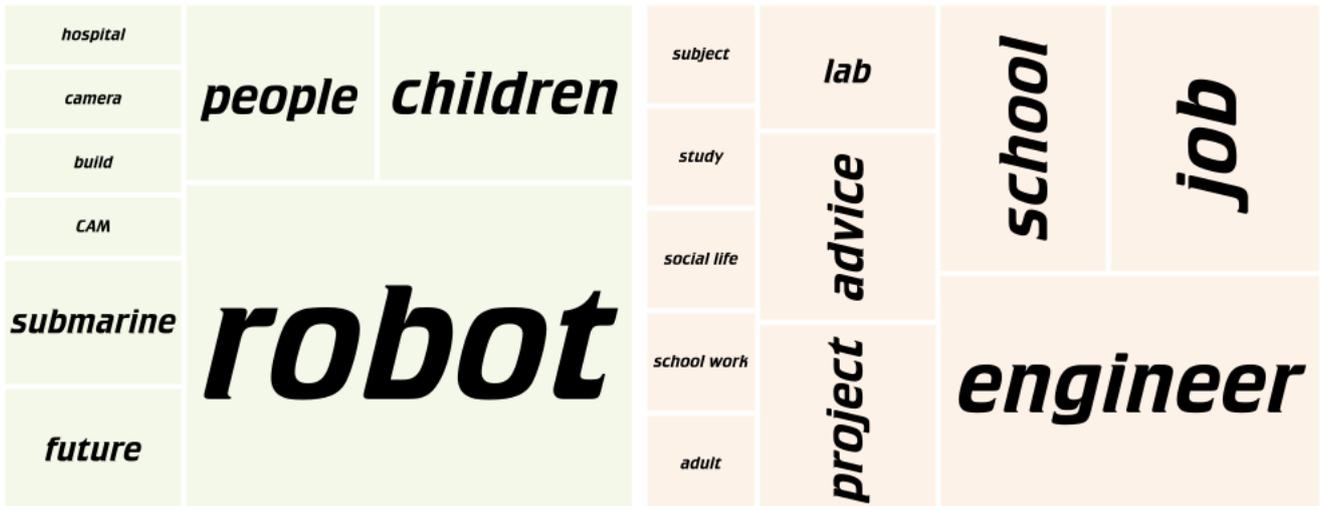


Keywords from live chats in the zone, size of the word represents its popularity



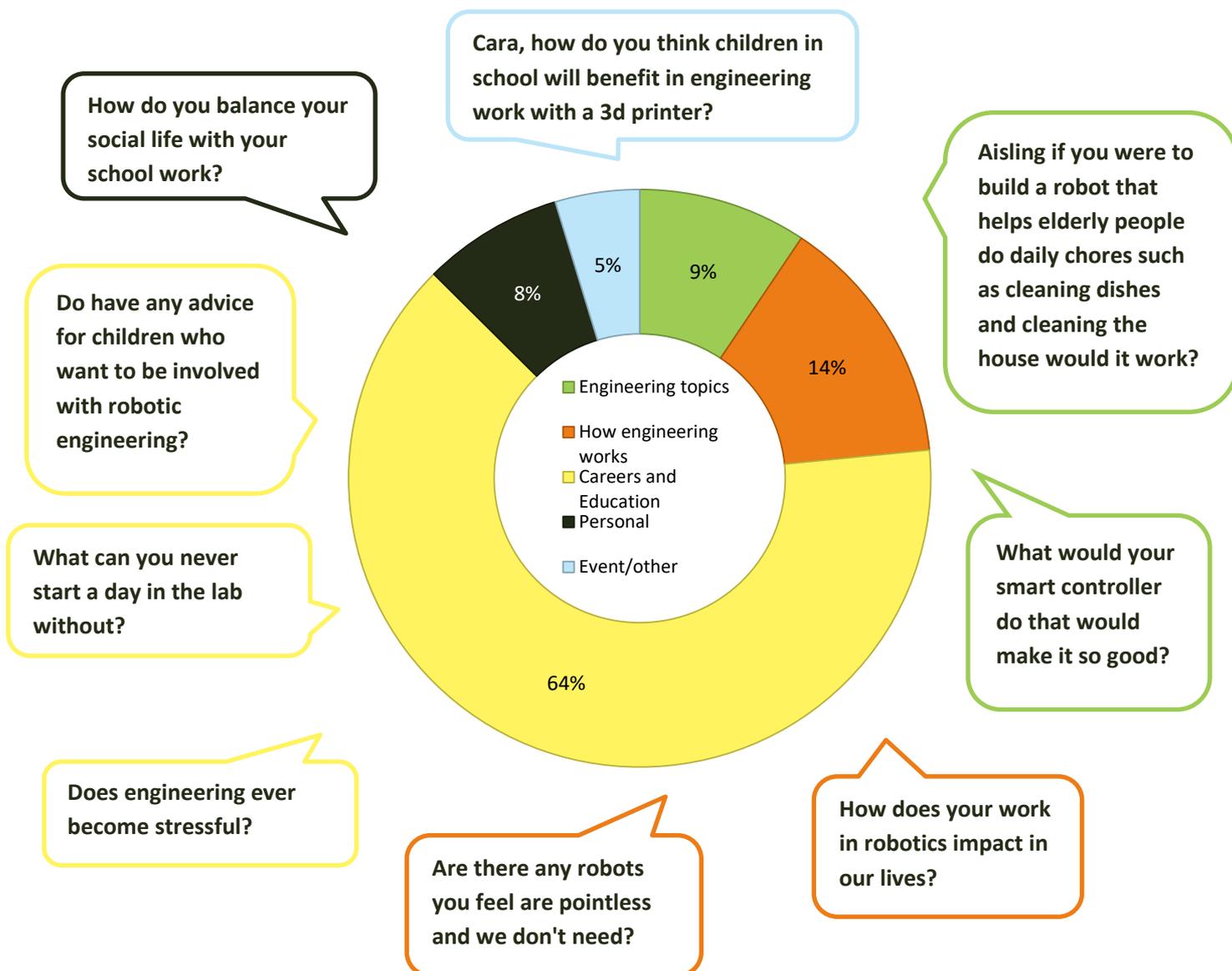
Top Keywords of questions approved in the Zone

Area represents frequency of use



Being an engineer Engineering

Question themes and example questions in the Zone



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

Examples of good engagement

Some students used the chats to talk about their own engineering ideas and plans, such as in this exchange between Graham and a student thinking about how they can solve problems in the Channel Tunnel:

"Could you make an underwater world using engineer?" – Student

"Well it is a bit impractical to make an underwater place to live due to the pressure and that the metal used to make the structure will rust." – Graham, engineer

"What if everything was made out of glass?" – Student

"You would still need a frame to hold the glass in place. One of the other main problems is the cost to make things underwater. If you want to do anything in the sea you need a boat and they are very expensive to run." – Graham, engineer

“What do you mean by frame?” – Student

“What I mean by frame is like a window frame that holds the glass in place, only underwater you would need a much stronger window frame.” – Graham, engineer

“What if the shape of the glass is similar to a bowl?” – Student

“You would still have the same problem with using glass shaped like a bowl, though sphere shaped glass would be better at dealing with the water pressure, it costs even more money to make sphere shaped glass than flat glass.” – Graham, engineer

“But is this possible?” – Student

“It is possible, just impractical and expensive. What would you use the underwater world for?” – Graham, engineer

“I would plan on putting one on top of the Channel tunnel in the near future” – Student

“That will be tricky, is it for people to live?” – Graham, engineer

“I would want it to be a tourist/small shopping mall first to get air from above the water to the Channel Tunnel” – Student

“I don’t know if people would spend extra time on the journey to stop at a mall in the middle of the channel tunnel...” – Graham, engineer

“Well it’s for the Channel tunnel to get air because there have been many accidents with oxygen in the channel tunnel. I want to try building one big enough to start holding people in because of the increase in population” – Student

Scientist winner: Graham Cullen

Graham’s plans for the prize money: *“I would use the money to donate 3D Printers and 3D printing filament (plastic) to a local school or library.”* Read Graham’s [thank you message](#).



Student winner: Lolly

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...

“[This was] a great opportunity to engage with school students and to give them an insight into what an engineer actually does. So, thank you to all the students who asked questions...You have all inspired me to spread the word about Engineering!” – Graham, engineer

“I have learnt that engineers have a very interesting job. I would love to be one myself” – Student