



Noel



Nina



Ivan



Gowthaman



Diana



Alice

March, 2019

The Production Zone was a themed engineering zone supported by Science Foundation Ireland. In this zone were:

- Noel O'Dowd, a Professor of Mechanical Engineering who researches new materials such as carbon fibre composite materials.
- Nina Kanti, an Electronic and Computer Engineer who develops apps and works with novel technology.
- Ivan Merrick, a Managing Director at Fraser Ross Ltd, responsible for delivering the most effective and efficient solutions to a range of clients engineering needs.
- Gowthaman Parivendhan, who uses computer-aided simulations to create models that predict the source and cause of defects in 3D printed objects.
- Diana Abrunhosa, the winner of the Production Zone, who designs water and wastewater treatment plants.
- Alice Selby, a PhD student developing methods for fabricating new resistors using nano-wires on glass.

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

PAGE VIEWS	PRODUCTION ZONE	MAR '19 ZONES AVERAGE
Total zone	12,884	13,258
ASK page	1,005	946
CHAT page	1,240	1,114
VOTE page	594	572

	PRODUCTION ZONE	MAR '19 ZONES AVERAGE	IAE 2012-19 AVERAGE
Production Zone Schools	13	10	10
Students logged in	353	327	295
% of students active in ASK, CHAT or VOTE	85%	86%	84%
Questions asked	461	407	456
Questions approved	189	191	223
Answers given	208	400	426
Comments	12	38	42
Votes	275	236	227
Live chats	20	18	14
Lines of live chat	4,838	4,602	3,649
Average lines per live chat	242	261	249

Popular topics

Students asked a lot of questions directly related to the engineers' areas of work. They were especially interested in Diana's work, asking about 'water', 'waste' and 'treatment'.

They also asked questions about the human body and the brain, relating to Alice's PhD.

In ASK, over 50% of the questions were about careers and education, namely the engineers' aspirations for the future and their daily workloads.



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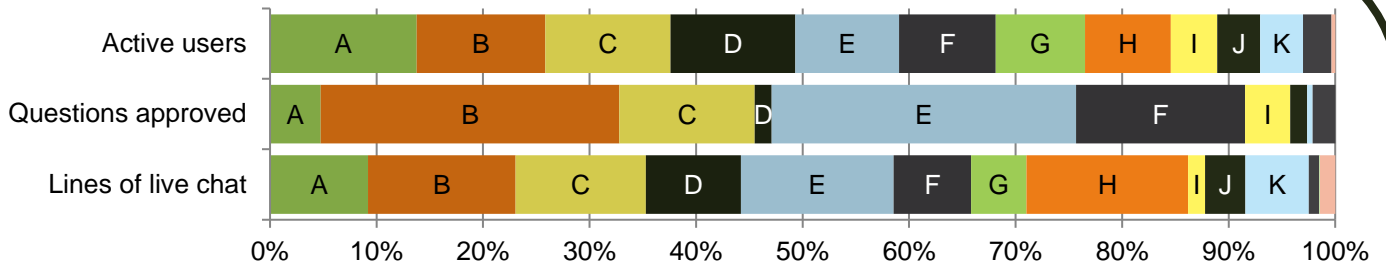


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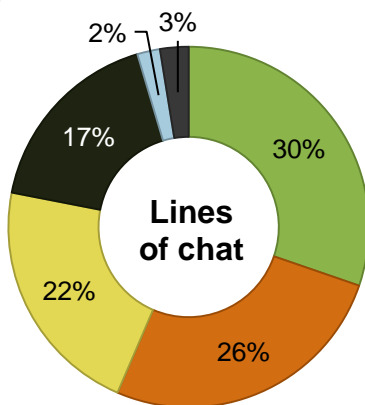
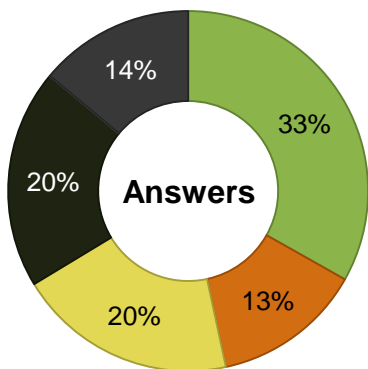
School data at a glance



School	Year/s	Classes	
A	Knockraha National School, Cork	5 th Class	2
B	St Matthew's National School, Dublin, U	3 rd Class – 6 th Class, Other	3
C	Coola Post Primary School, Sligo	5 th Year, 1 st Year, Transition Year	4
D	Regina Mundi College, Cork	Transition Year	3
E	St Pius X National School, Dublin, U	5 th Class	1
F	Roxboro National School, Roscommon, U	6 th Class	1
G	Moneystown National School, Wicklow, U	5 th and 6 th Class	1
H	Brierhill School, Galway	6 th Class	1
I	Two Mile Community National School, Kerry	3 rd Class – 6 th Class	1
J	Clouna National School, Clare, U	4 th Class – 6 th Class	1
K	Scoil Mhuire, Leitrim, U	3 rd Class	1
L	Le Cheile Secondary School, Dublin, U	Mixed STEM Club	1
M	Parteen National School, Clare, U	Mixed STEM Club	2

We want to increase the participation of under-represented groups going into STEM careers. Find out what we mean by our under-served (U) and DEIS schools, and how you can support us in working with more of these at about.imascientist.org.uk/under-served-and-wp/

Engineer activity



ENGINEER	PROFILE VIEWS	POSITION
Diana Abrunhosa	405	Winner
Noel O'Dowd	484	2nd
Gowthaman Parivendhan	399	3rd
Alice Selby	290	4th
Nina Kanti	335	5th
Ivan Merrick	364	6th



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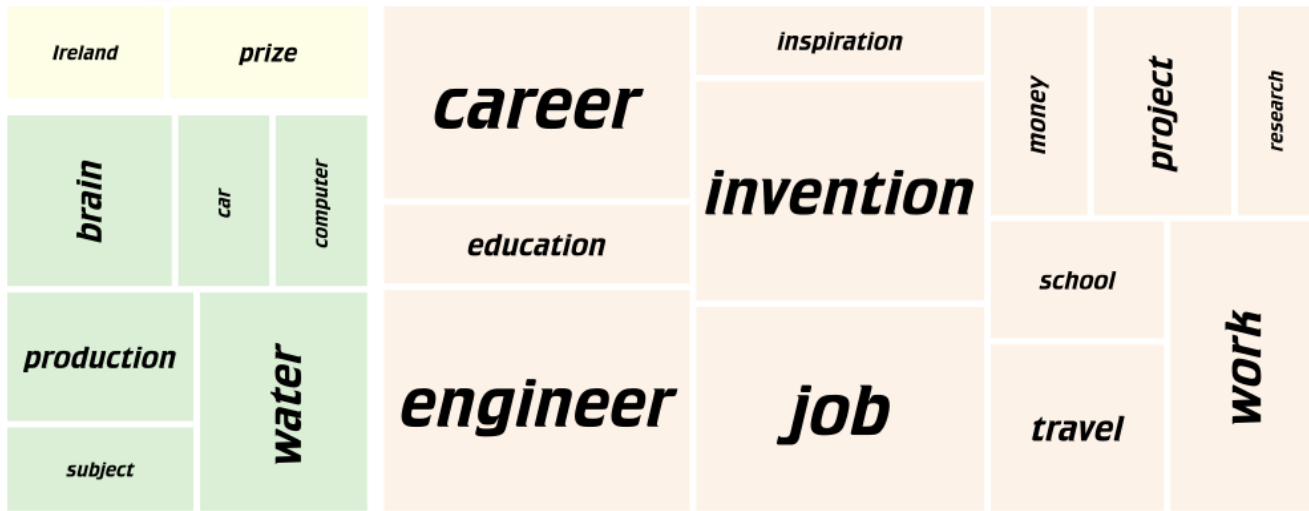


Alice

Ask ?

Top Keywords of questions approved in the Zone

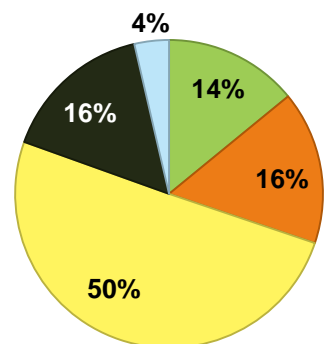
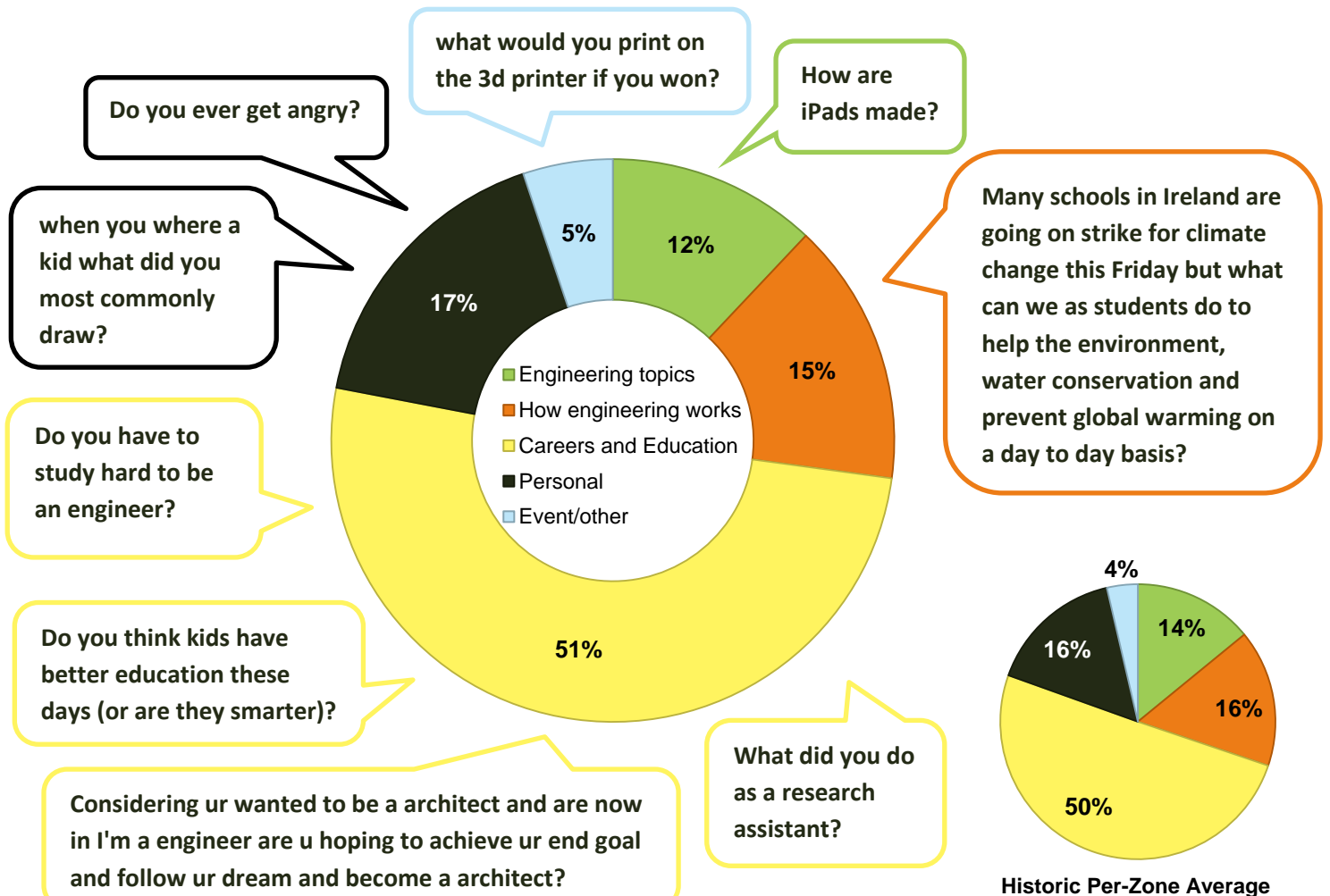
Area represents frequency of use



■ Other ■ Engineering ■ Being an Engineer

Question themes and example questions in the Zone

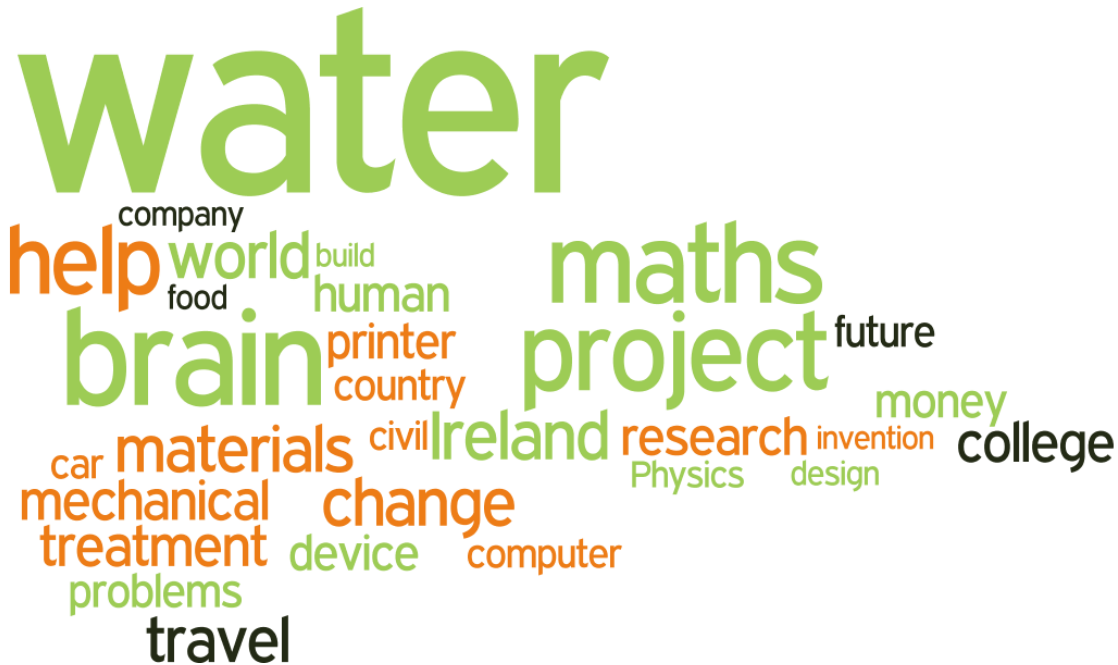
Find out about how we've coded the questions at about.imascientist.org.uk/what-do-students-ask-about/



Historic Per-Zone Average

Chat 

Frequent words used in live chats by students and scientists. Size of the word represents its popularity



Examples of good engagement

When the engineers were trying to explain tricky concepts, they would often use analogies or frames of reference that the students would be able to understand. Below, a student asks about Alice’s work and learns about nanowires:

“How will you make a human brain good luck” – Student

“Thank you. I’m trying to make them on glass with nanowires and gold and tin foil” – Alice, Engineer

“Thats so cool. How can you work with nano wires if they are so small you can’t see them” – Student

“It’s like the hairs on your head, sometimes you can’t see just one, but they collect together and you can see a bunch of them. We also have really cool microscopes. I am only making a small bit of what could be a brain, as a full brain has 1,000,000,000’s of parts” – Alice, Engineer

“Why are you using glass” – Student

“Glass is cheap and easy to use and isn’t conductive so we can be sure we are just testing what’s on top” – Alice, Engineer



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Students were also keen to share their own experiences with the engineers, and used the upcoming strike for climate to ask about global warming:

“Many schools in Ireland are going on strike for climate change this Friday but what can we as students do to help the environment, water conservation and prevent global warming on a day to day basis?” – Student

“Small steps are great! From saving water when showering, cycle instead of driving (for your parents)... Thinks to avoid damaging the environment, basically! And ask people to do the same! 😊 Little by little we can make this world better!” – Diana, Engineer



Engineer winner: Diana Abrunhosa

Diana’s plans for the prize money: *“I will donate the money to Engineers Without Borders – Ireland. They do a lot of projects with schools and universities including design competitions. This would help organizing another design challenge with EWB to motivate students to think about STEM subjects and how we help others with our knowledge.”*

Read Diana’s [thank you message](#).

Student winner: 268prdq36

268prdq36 from St Pius X Girls’ National School was nominated by the engineers for their questions, which included “If your human brain device works, will you make animal brains to find out more about their diseases?” and “What kind of things do you simulate?”.

As the student winner, 268prdq36 will receive a certificate and a gift voucher.

Feedback

We’re still collecting feedback from teachers, students and engineers but here are a few of the comments made about the Production Zone...

We`re just finished our live chat with Noel and Alice. The girls had such fun and got a great buzz from the engineers answering their questions on the spot. The engineers were very clear in their responses and were very witty. There were not only engineering questions but also jokes and chats about pancake Tuesday!

The girls told the engineers about their upcoming visit to Science Blast in the RDS on Thursday. The girls will be presenting their project on bacteria and were asking for advice. They got great advice. They have also changed their minds about who they are going to vote for! – **Teacher**

A great opportunity to use the technology the students have now in their schools and help them understand the engineering world – **Diana, zone winner**



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And here are a few comments made about March's *I'm an Engineer* activity...

I have learned that there are so many different types of engineering. Asking the engineers questions has inspired me to be something like an engineer when I am older. I have always wanted to be a teacher or a doctor but I also love making things at home and doing this has made me realise that I can do all of these things in the one job. I hope to one day become an engineer who works on the human body and that does lots of lectures and it's all because of I'm an engineer 2019!!!!!! – **Student**

It was a fantastic experience.
Loved it – **Teacher**

I was impressed by the level of the questions from the students, both in the live chats and in the "Ask" section. I'm confident that there's no shortage of great up-and-coming scientists and engineers to fill the many roles that continue to be created in STEM industries and institutions across Ireland. – **Engineer**