



Stephen



Sita



Rory



Hannah



Brian



Alison



March, 2019

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

- Stephen O'Connor, the winner in the zone, who tests different materials to find out if they can be used to build satellites.
- Sita Karki, a Computational Scientist who works with satellite images to study the environment.
- Rory Scarrott uses satellites to look at the oceans, their surface structure and how it changes.
- Hannah Currivan, who designs electronics to go on satellites.
- Brian O'Connor studies satellite images and other maps to see how nature is disappearing.
- Alison Dufresne, a Space Propulsion Engineer who designs and builds rocket engines.

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

PAGE VIEWS	SPACE ZONE	MAR '19 ZONES AVERAGE
Total zone	10,784	13,258
ASK page	558	946
CHAT page	846	1,114
VOTE page	414	572

	SPACE ZONE	MAR '19 ZONES AVERAGE	IAE 2012-19 AVERAGE
Space Zone Schools	8	10	10
Students logged in	258	327	295
% of students active in ASK, CHAT or VOTE	86%	86%	84%
Questions asked	242	407	456
Questions approved	127	191	223
Answers given	356	400	426
Comments	16	38	42
Votes	185	236	227
Live chats	16	18	14
Lines of live chat	3,611	4,602	3,649
Average lines per live chat	226	261	249

Popular topics

The Space Zone was very on topic, with lots of questions in ASK and CHAT involving 'space', 'satellites' and 'planets'. The students asked questions about the science of space and space travel, but also about each of the engineers' work areas and if they had any desires to travel in space.

This zone had more questions in ASK categorised as 'engineering topics' and 'how engineering works' than the other *I'm an Engineer* zones this March. This included things like "How does your early warning system work?" directed at Sita, or more general context and society questions such as "Do you think it's harder for a girl to be an engineer rather than a boy?"



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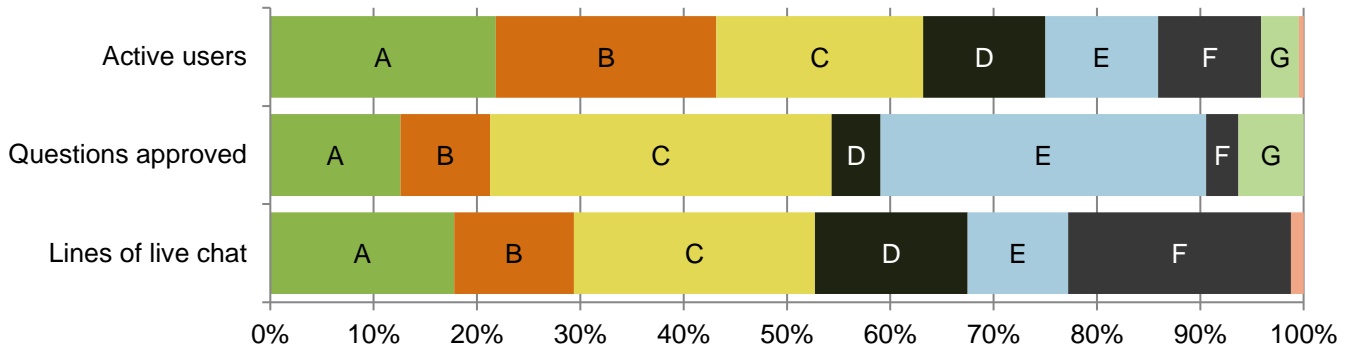


Brian



Alison

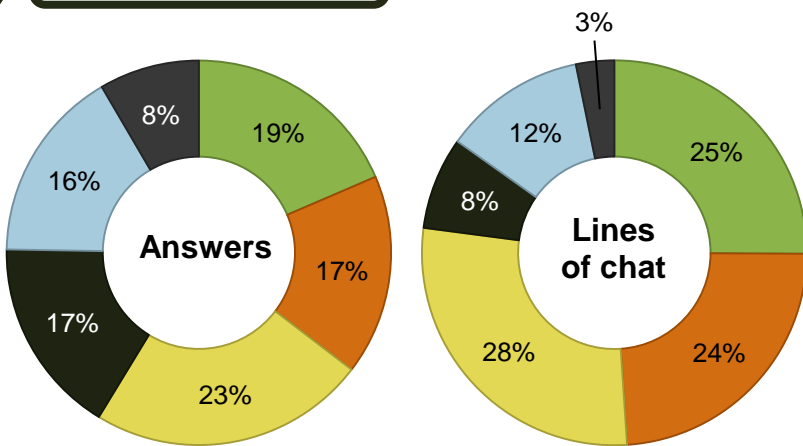
School data at a glance



School	Year/s	Classes	
A	Fingal Community College, Dublin, U	1 st – 2 nd Year	2
B	Blessington Community College, Wicklow, U	Transition Year	2
C	Coláiste Bríde, Dublin	2 nd Year	2
D	Gaelcholáiste an Phiarsaigh, Dublin	1 st Year	1
E	St. Leonard's NS Dunnamaggin, Kilkenny	5 th Class	1
F	Our Lady Queen Of Apostles, Dublin, DEIS/U	3 rd Class	4
G	Trinity Comprehensive School, Dublin, DEIS/ U	2 nd Year	1
H	S N Baile Ui Ghiblin, Cork	6 th Class	1

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

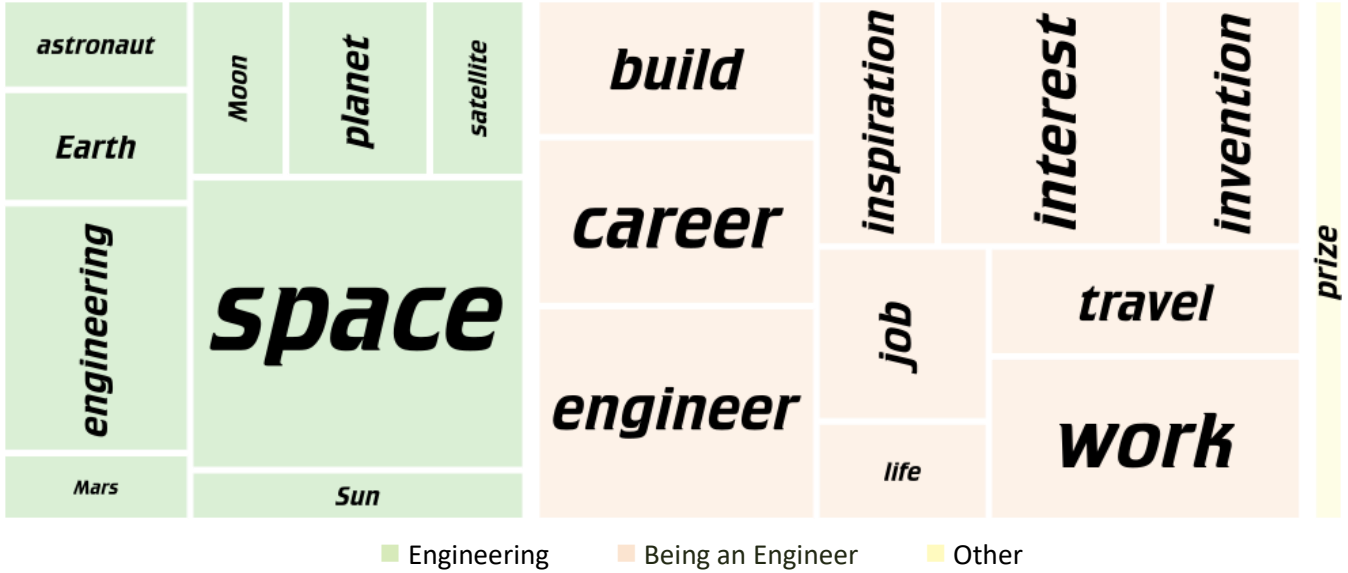


ENGINEER	PROFILE VIEWS	POSITION
Stephen O'Connor	431	Winner
Rory Scarrot	208	2nd
Sita Karki	287	3rd
Alison Dufresne	194	4th
Hannah Currivan	285	5th
Brian O'Connor	184	6th

Ask?

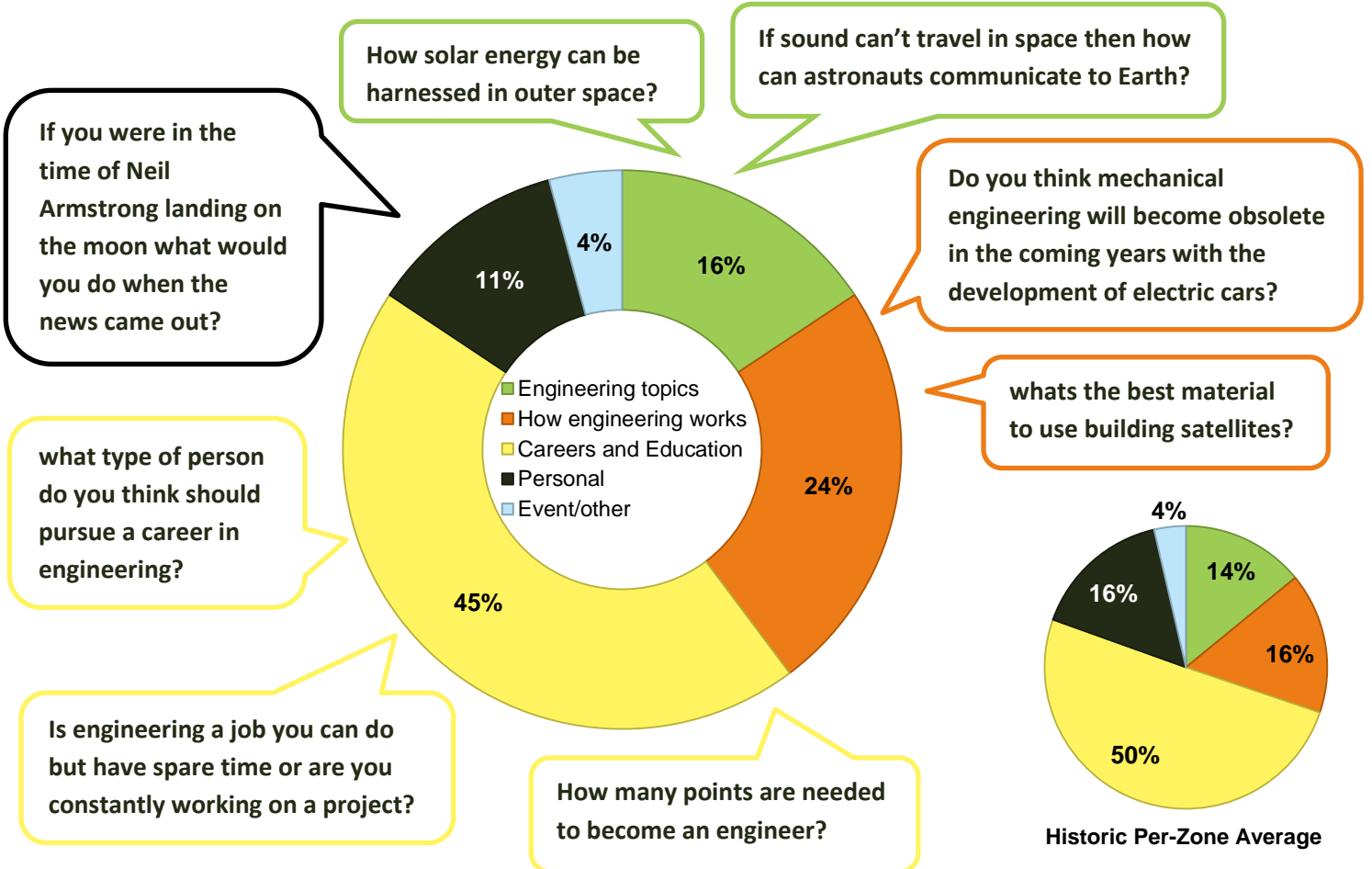
Top Keywords of questions approved in the Zone

Area represents frequency of use



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/





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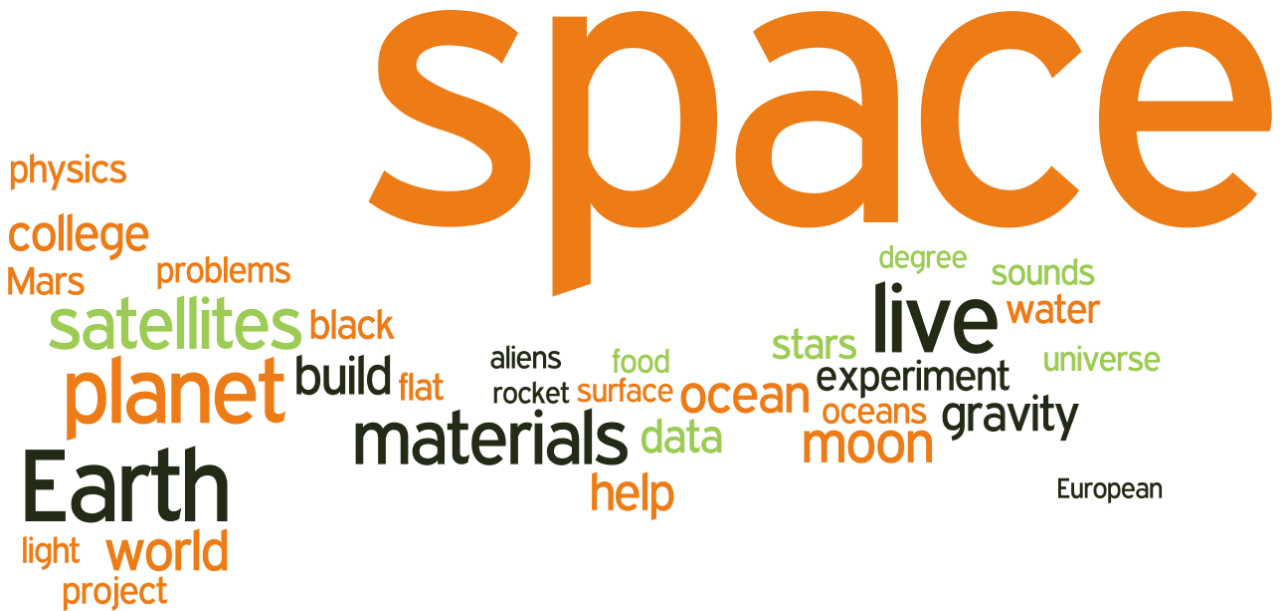
Brian



Alison

Chat 

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



Examples of good engagement

Students were very interested in the zone theme and wanted to know about the different projects the engineers had worked on. All the engineers wrote accessible answers for the students to understand.

“What is the coolest thing you have made to aid in space travel?” – Student

“Unfortunately I have not yet made anything to aid in space travel. I’ll keep writing down some ideas though... always write down your ideas, no matter how silly they may seem.” – Rory, Engineer

“Propulsion systems, some of which are in orbit helping move around satellites. 😊 Very much a dream come true – to have helped design and build these systems. The coolest engine I’ve built hasn’t been flown yet. It’s still in development. It’s 3D printed and regeneratively cooled. I’m super excited to get that one qualified to fly in space!!” – Alison, Engineer

“I am afraid, I have ever made anything that directly helped in the space travel. May be something to do for future.” – Sita, Engineer

“During the summer while working for a company here in Ireland’s space industry called “InnaLabs’ I worked on gyroscopes which are used in the aerospace industry!!! I have helped in space travel in terms of myself gaining experience in spacecraft operations from a European Space Agency trainee week, which I will eventually be contributing to my career and space travel in operating satellites in orbit around Earth. 😊 😊 😊” – Hannah, Engineer

“Hannah and Alison you are so lucky! Rory and Sita keep trying I know you will come up with something” – Student



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Students were interested in the engineers' personal lives and experiences, wanting to know about their families:

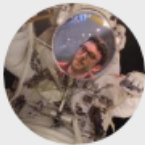


Question: Are any of your family members engineers?



Keywords: engineer, family

Asked by [Migle05](#) to [Alison](#), [Hannah](#), [Rory](#), [Sita](#), [Stephen](#) on 8 Mar 2019.



[Stephen O'Connor](#) answered on 8 Mar 2019: last edited 8 Mar 2019 2:11 pm

Just my brother – he is an electronic engineer – they design and test semiconductors and other electrical components.



Semiconductors are special materials that have electrical conductivity halfway between good conductors (metals like copper or aluminium) and bad conductors (like wood or plastic).

They basically allow you to control the flow of electricity through electronic circuits – acting as switches and valves, and other such control points.

They are the basic building block of modern technology – computers, mobile phones, tvs, etc.



[Hannah Currvan](#) answered on 12 Mar 2019:

No! Just me!!! 😊😊😊 I am a physicist and an engineer 😊😊😊 I have been part of the I-LOFAR build (Irish Low Frequency Array Radio Telescope) team, and I have also been to training at the European Space Agency for Spacecraft Operations, and currently I am building a Tupper Sat which is a lunchbox with a experiment inside which will launch on a weather balloon 😊😊😊

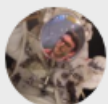


[gabi](#) commented on 8 Mar 2019:

do you sometimes work together



[Reply to this comment](#) ([Edit](#))



[Stephen](#) commented on 12 Mar 2019:

Not directly but he has helped me since I was young with maths and other stuff big brothers are for! He is twelve years older than I am and is always there for advice.



[Reply to this comment](#) ([Edit](#))



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Engineer winner: **Stephen O'Connor**

Stephen's plans for the prize money: "I would make a YouTube series for Irish schools on materials, the space environment, and the challenges facing future missions."

Read Stephen's [thank you message](#).

Student winner: **S.B123**

S.B123 from Fingal Community College was nominated by the engineers for their excellent questions. As the student winner, S.B123 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 Space Zone...

The students' questions have been really class, pushed me to actually think outside my oceaney comfort bubble. – **Rory, Engineer**

to all the school students and teachers – thank you so much for posting your amazing questions in ASK and CHAT. I'm still thinking about many of them, and there were some that we could talk all day about! I encourage you to keep reading and discussing these ideas with your classmates, friends, and family. – **Stephen, zone winner**

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

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**

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**