



November 2018

The Space Zone was a themed zone supported by the UK Space Agency and featured six engineers:

- Samuel Bancroft works in the tech team at Earth-i and develops code to process data from live satellites
- Robson Witts is an apprentice at Oxford Space Systems and creates deployable satellite structures for the space industry
- Reshma Vora is a product application specialist at NAVBLUE and uses techniques to predict the availability of GPS to help pilots navigate
- Raam Shanker is the founder of Equitus Engineering Ltd, making parts for rockets that are sent to space
- K-Jo O'Flynn, this zone's winner, is also an apprentice at Oxford Space Systems, where she builds antennas and other space technologies
- Alison Dufresne is a propulsion and systems engineer at Deep Space Industries where she designs and build rocket engines

The students in this zone were keen to hear about the different paths the engineers took to get to their current roles, especially interested in K-Jo and Robson's experience getting an apprenticeship. K-Jo is the youngest ever winner of *I'm an Engineer*, and at 17 she was closer in age to the students than to most of the other engineers in the zone. The students engaged well with her and could relate to her more recent experiences.



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 WP schools (WP), and how you can support us in working with more of these at about.imascientist.org.uk/under-served

MangorollaCIC

01225 326892 | amy@mangorol.la



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

PAGE VIEWS	SPACE ZONE	NOV '18 ZONES AVERAGE
Total zone	19,079	14,630
ASK page	1,428	1,119
CHAT page	1,963	1,536
VOTE page	743	589

Popular topics

In both ASK and CHAT, the zone theme was a popular theme. 'Space' questions in live chats included "How do we know so much about space?" and "Has any of your tech made it to space?"

'School' was another popular topic in live chats, often relating to questions the students had about how the engineers enjoyed school, and what GCSEs/A Levels they took.

	SPACE ZONE	NOV '18 ZONES AVERAGE	
Space Zone Schools	12	9	11
Students logged in	462	392	399
% of students active in ASK, CHAT or VOTE	87%	87%	85%
Questions asked	577	518	586
Questions approved	312	275	225
Answers given	576	471	438
Comments	26	26	43
Votes	352	293	296
Live chats	19	16	17
Lines of live chat	6,759	6,188	5,451
Average lines per live chat	356	394	314

Students asked questions about how engineering would affect people, or if the engineers' were working on things that would help future societies.

Students showed an interest in K-Jo and Robson's apprenticeships with Oxford Space Systems, asking things such as "Were there many apprenticeships available? and "What GCSE's do you need to get an apprenticeship?"

In response to questions about career paths and education, the engineers were able to give a range of responses and differing advice to the students, helping them to see that there is no one way into the industry.



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Top Keywords of questions approved in the Zone

ecse	career	job		research	ler l'm an Engineer	engineering	future
age		school			gender	satellite	
ġ	challenge		work	workplace			subject
apprenticeship	engineer	spare time	ЭМ	work	prize	space	ns
	D	eing an engineer	Other	Eng	ineering		

When keywording, questions were marked as 'career' if they concerned the engineers' career path, 'job' when a question was about a specific role and 'work' when a question is about their typical day in their role.



UK SPACE AGENCY

Question themes and example questions in the Zone

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



Examples of good engagement

Students were very interested in K-Jo's apprenticeship, wanting to know about the steps she took to find one, to details of what she does on a daily basis. In all live chats that she attended, students would ask questions like the following example. When she responded, K-Jo was open, friendly and often used emojis:

"@K-Jo was it quite easy to find a good apprenticeship?" - Student 1

"I got very lucky and found my one which is amazing but when choosing one you have to make sure you know you will enjoy it and make sure it's right for you :D" – K-Jo, engineer

"Is your job quite hard? and what does it consist of?" - Student 2

"It defiantly is but thats the fun of it! There's always problem solving and new things to make and we also have to hit deadlines for customers :D'' - K-Jo, engineer

"what kind of projects do customers ask for?" - Student 1

"They ask for different space technologies from satellites to antennas to booms :D" - K-Jo, engineer

"wow that sounds really interesting!" - Student 1

"Thank you :D" – K-Jo, engineer

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In another live chat, one student wasn't sure they could ask what they wanted to, but when Samuel responded they were clearly impressed:

"Luis wants to know (if possible!) What's the most expensive project you've ever worked on?" - Student

"Ooh, I'm just able to talk about this :) Recently Earth-i won a bid to work on a 'SatellAlve project' Using Artificial Intelligence on VIDEOS taken from space :) lots of money being spent to prototype new products. E.g. filming things happening in the space of 60 seconds and intelligently finding patterns from that. Expect to see that on BBC one day... It's big" – Samuel, engineer

"Wow! That's awesome" - Student



Engineer winner: K-Jo O'Flynn

K-Jo's plans for the prize money: "to help children find engineering apprenticeships and courses for children in schools to have a proper understanding and experience of the world of engineering."

Read K-Jo's thank you message.

Student winner: Rosie

For great engagement during the activity, 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 November's *I'm an Engineer* activity...

It was a great experience for the pupils again with minimal effort from the teachers required. Thank you so much. We will definitely do this again. – **Teacher**

I'm an Engineer is really such a remarkable experience as it provides so many opportunities for students and helps motivate people in so many ways! Everyone gets to meet and learn different characters and personalities through the people they meet through it and it helps show the endless opportunities that people can choose in engineering. **– K-Jo, zone winner** [I have learnt] that engineering comes in different varieties and people can work alone or as a team. They also do different things for example not all engineers build things, some just stay in the office. – **Student**

It allows the quietest of pupils to have a voice and to understand science/engineering opportunities and facts to become a reality in their own world. Promotes great conversations before, during and after the event.



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