

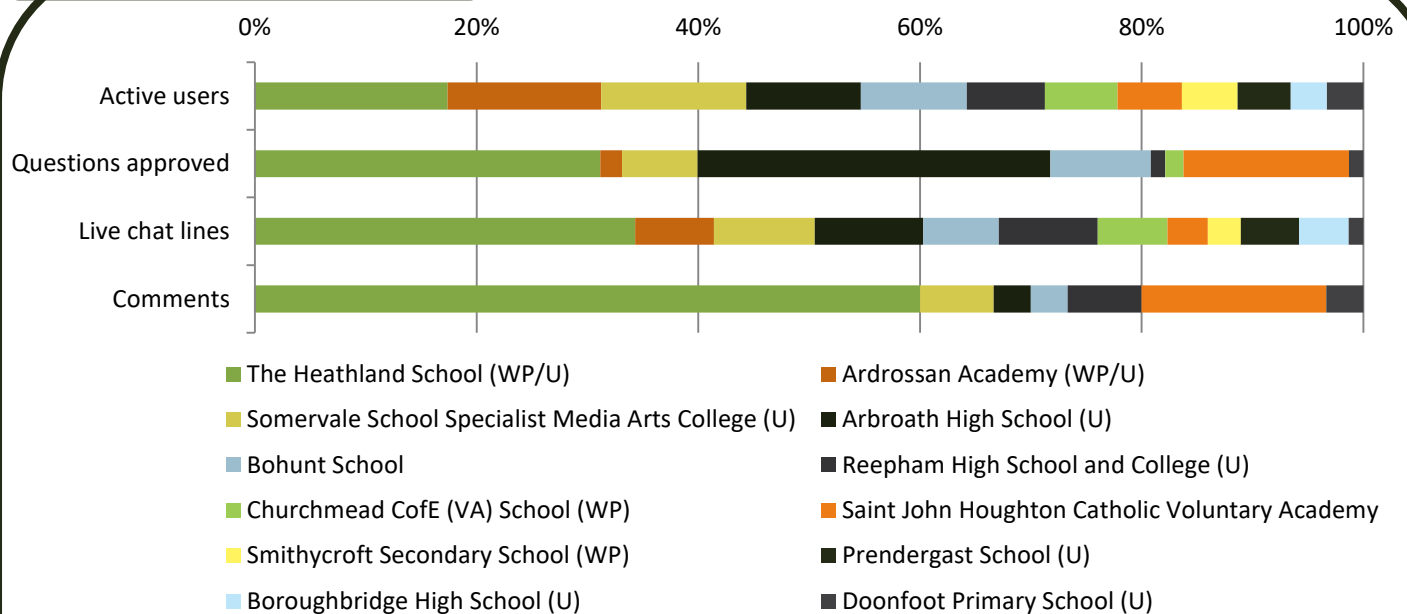
## November 2017

The Mole Zone was a general engineering Zone supported by the Royal Academy of Engineering, with six people working in different areas of engineering. Matt is a Process Safety Engineer assessing high hazard facilities, Lauren, the winner of this Zone, designs steam and water storage vessels installed in venues such as Wembley Stadium and Josh is a student in product design engineering. Jo works for Air Products separating air into different elements and then selling these onto customers as a gas or liquid, Diana is a telecoms engineer for satellite operator Avanti Communications and Carson is a student working with robots to help create scenes for virtual reality.

As this was a general engineering Zone conversations were varied, and all the engineers were good at answering questions about their own work areas as well as about engineering in general. The majority of questions from students in Ask were about careers and education and there was a lot of interest in how to become an engineer, and what it's like to work as one on a day to day basis.

Students also took an interest in the prize money and often asked the engineers about their plans for spending it if they won, taking their votes seriously.

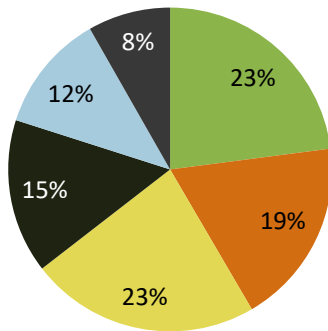
### School data at a glance



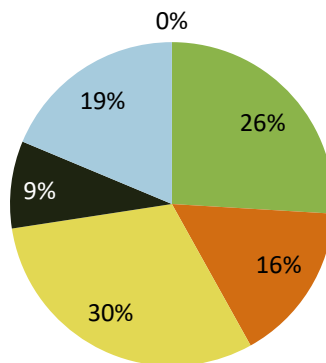
We want to increase the participation of under-represented groups going into STEM careers. Find out what we mean by our under-served (U) and WP schools (WP), and how you can support us in working with more of these at [about.imascientist.org.uk/under-served-and-wp/](http://about.imascientist.org.uk/under-served-and-wp/)

## Engineer activity

### Answers



### Live chat lines



ENGINEER	PROFILE VIEWS	POSITION
Lauren Ashmore	893	Winner
Carson Vogt	697	2nd
Jo Collins	679	3rd
Joshua Hosking	584	4th
Matt Vickers	779	5th
Diana Mathew	474	6th

## Key figures from the Mole Zone and the averages of the November zones

PAGE VIEWS	MOLE ZONE	NOV '17 ZONES AVERAGE
Total zone	18,355	22,589
ASK page	1,701	1,788
CHAT page	1,840	2,543
VOTE page	1,651	1,989

	MOLE ZONE	NOV '17 ZONES AVERAGE	IAE 2012-17 AVERAGE
Schools	12	14	11
Students logged in	453	499	407
% of students active in ASK, CHAT or VOTE	88%	89%	85%
Questions asked	786	673	612
Questions approved	271	264	228
Answers given	279	525	457
Comments	31	47	45
Votes	330	395	305
Live chats	20	20	17
Lines of live chat	6,555	7,063	5,476
Average lines per live chat	328	351	316

### Popular topics

Students were interested in the engineers' jobs especially those they could relate to such as Carson's work with robots, contributing to their Science Capital. Students wanted to know about the different types of robots he has worked with, how expensive they are to make and how they can be used to develop virtual reality. Jo had written on her profile that she 'sells air' for a job, and lots of students asked how this is possible, and about the process behind separating air.

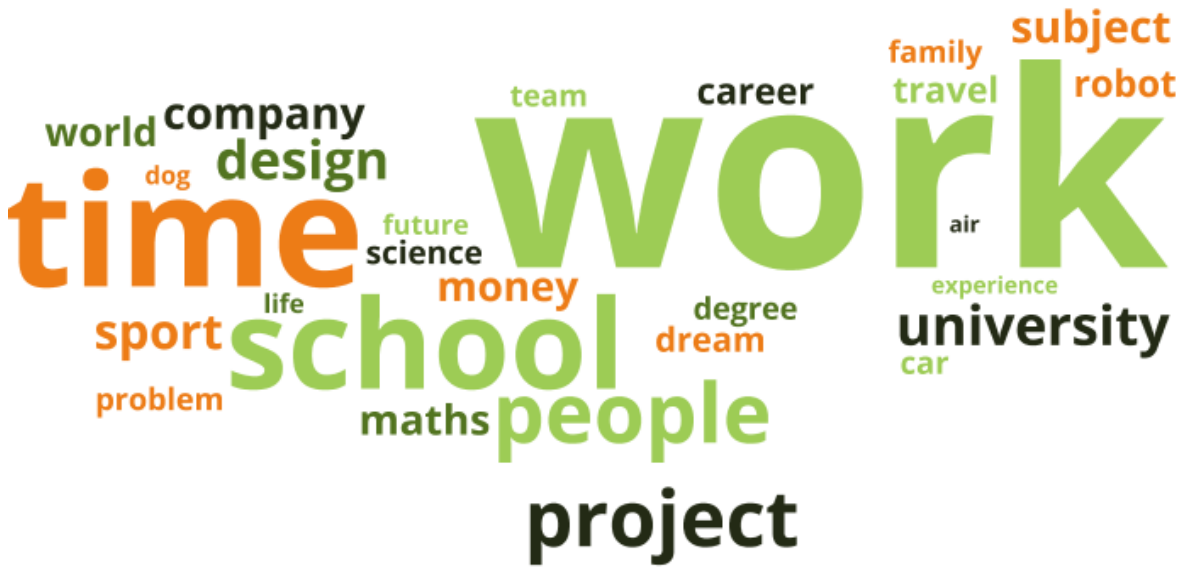
The majority of questions were about education and working as an engineer. Students asked about different courses, the qualifications and skills needed, as well as what personal attributes are valuable for engineering. The engineers were asked whether they have travelled with their jobs and where they have been.

Students wanted to know what the best and worst parts of being an engineer are, if the engineers have ever worked on something that turned out to be a disaster and what part of their jobs they find most challenging.

Chat



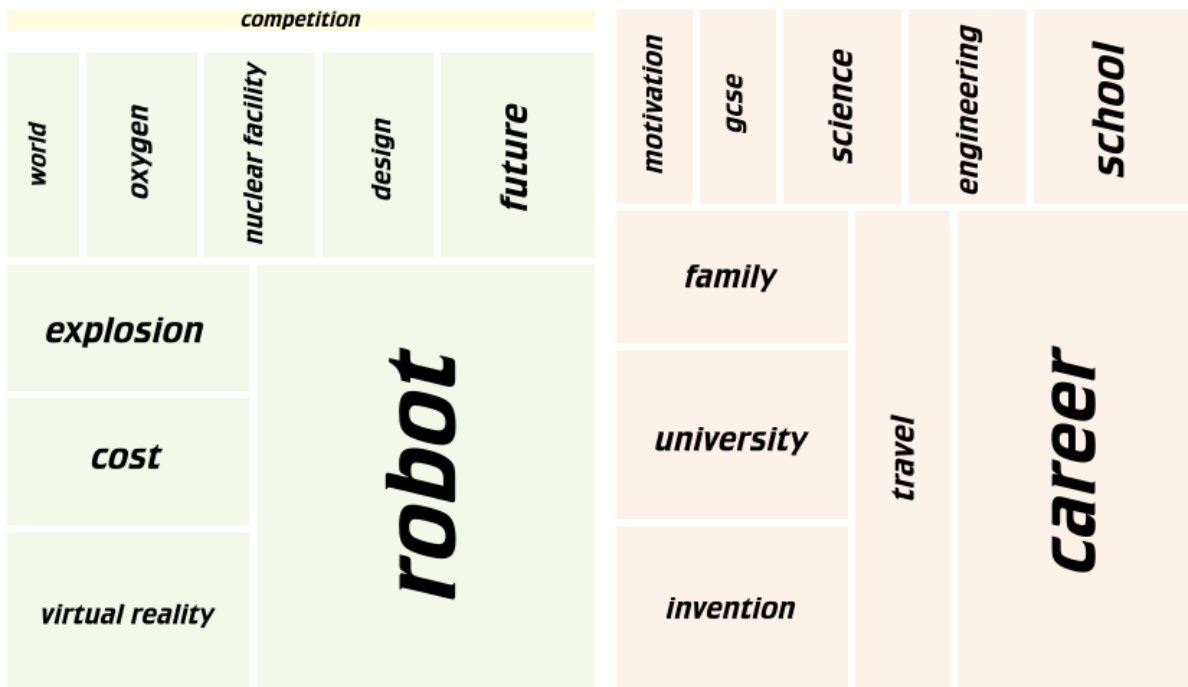
Keywords from live chats in the zone, size of the word represents its popularity



## Ask?

### Top Keywords of questions approved in the Zone

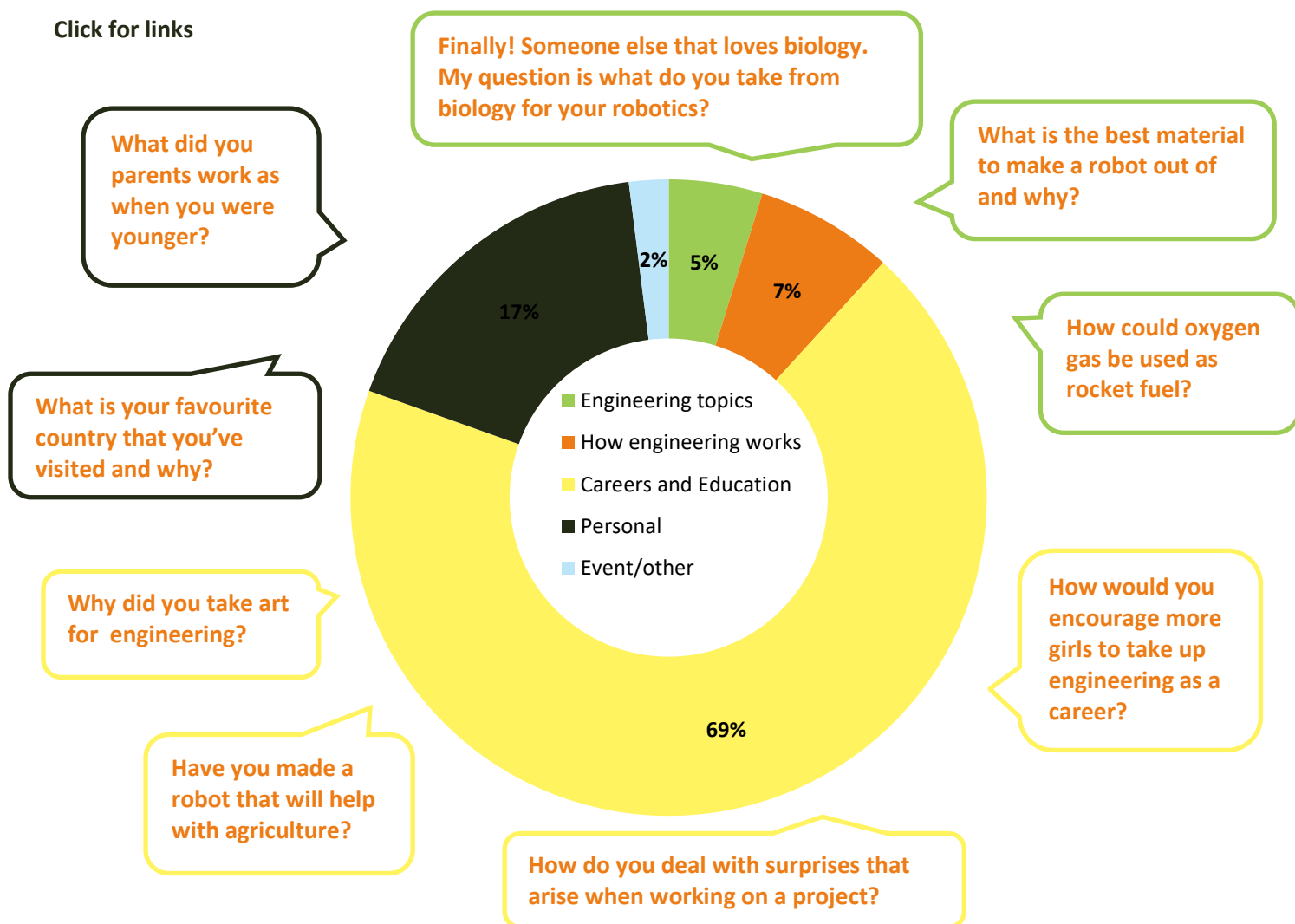
Area represents frequency of use



Being an engineer Engineering Other

## 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](http://about.imascientist.org.uk/2017/student-question-coding)

## Examples of good engagement

Students were curious about the engineers' jobs and asked about the different things they had read on their profiles such as Jo's job 'selling air':

*"What do you mean by you "sell air" as your work?" – Student*

*"We take the air into our big air separation units and separate the air into oxygen, nitrogen and argon and then sell those components. Does that help explain?" – Jo, engineer*

*"How long does it take you to separate all the gasses?" – Student*

*"It's a continuous process so the air gets sucked in and then it's separated very quickly, before being sent to storage or to the customer" – Jo, engineer*

*"Where do you ship the gasses to?" – Student*

*“A lot of steelworks use our oxygen. We also send oxygen to hospitals, nitrogen to food packaging places or big semiconductor plants” – Jo, engineer*

There was also a lot of interest in robotics, because of Carson’s research:

*“How long does it take to make an average sized robot?” – Student*

*“What’s average sized to you?” – Carson, engineer*

*“About 4 ft” – Student*

*“What do you want this 4ft robot to do? That will also determine the length of time to build it” – Carson, engineer*

*“Just move?” – Student*

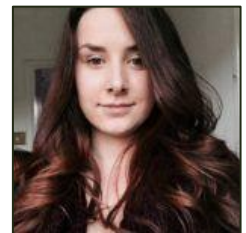
*“Oh easy, couple hours. Unless you want more complex movements, like balance, jumping etc” – Carson, engineer*

*“Have you ever accidentally killed a robot?” – Student*

*“Yep, short-circuited one once :(” – Carson, engineer*

### **Scientist winner: Lauren Ashmore**

Lauren’s plans for the prize money: *“The money would be donated to my local authority’s Employment and Skills department who run “Tameside Menu of Choice” which provides investment in the borough’s future by helping to provide great quality careers education to local schools and clubs.”* Read Lauren’s [thank you message](#).



### **Student winner: Slytherin Queen**

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...

*“Thank you so much - they definitely enjoyed it! The buzz in the room was awesome!” – Teacher*

*“It was great to be involved from my desk and make it fit around my availability without having to take a whole day off work. The immediate feedback of the chats was great.” – Jo, engineer*