Actinium Zone Ac


Samantha


Matt


Deborah


Adele


Adam

I'm a Scientist Get me out of here

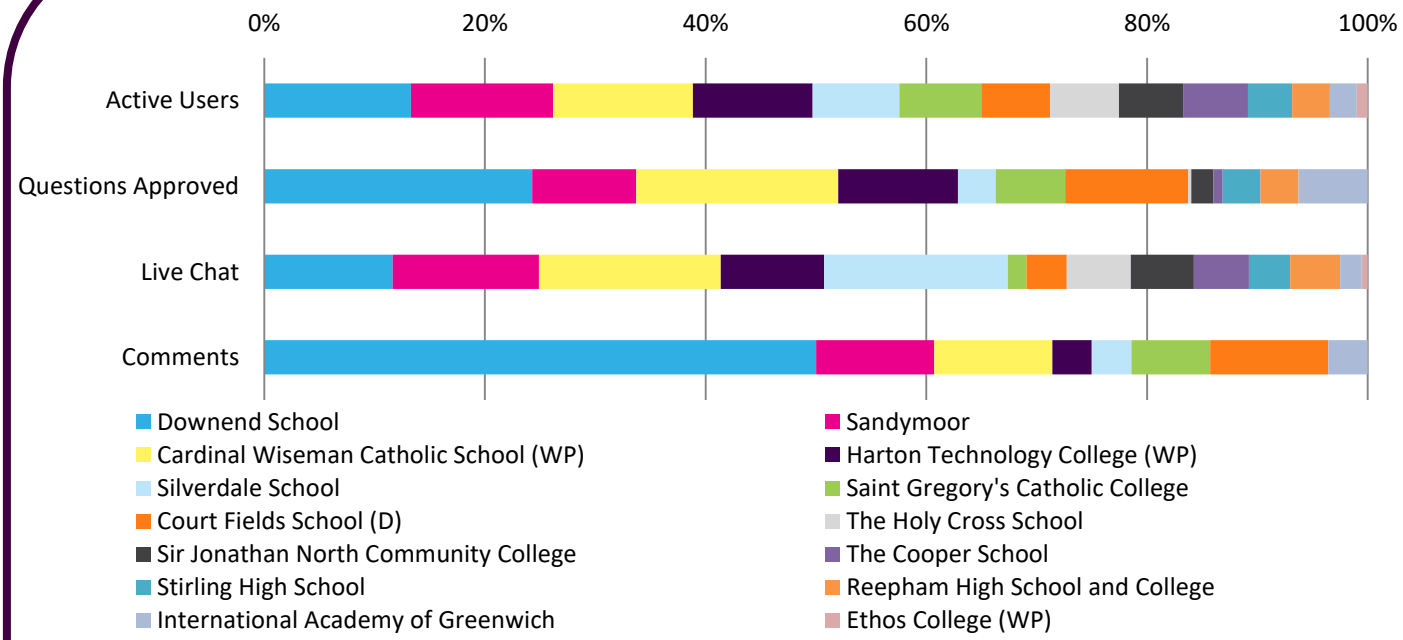
June 2017

The Actinium Zone was a themed zone funded by Wellcome. Samantha is an Educational Data Scientist analysing data to try and find out how students learn, Matt - the winner of this zone – is a Research Technician studying colorectal cancer and Deborah is working with robots to teach school students healthcare skills. Adele works for an engineering company working out how future buildings and developments could affect the environment and Adam is a postdoctoral research fellow currently studying venomous snakes to make new anti-venoms.

This zone was busy, with a higher than average percentage of active students and questions asked. Chats were often lively and fun, due to the scientists' ability to easily engage with students. Matt and Adam were especially good at finding common ground with students, sharing jokes and building a rapport. They also made up nearly 75% of all activity by scientists in ASK and the Live Chats.

Students engaged with the work of all five scientists, with Matt, Adam and Deborah's work being easy to relate to and attracting the most attention.

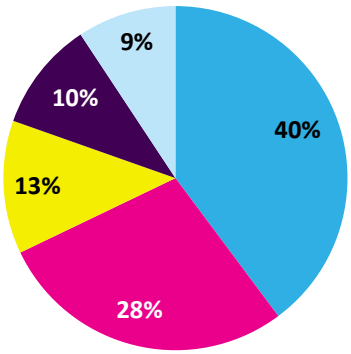
School data at a glance



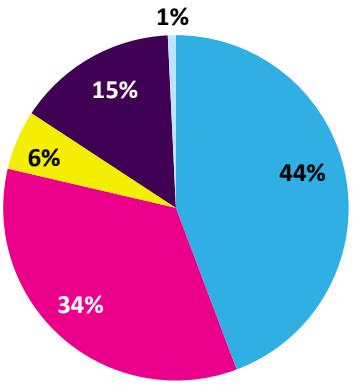
We want to increase the participation of under-represented groups going into STEM careers. Find out what we mean by our Widening Participation (WP) and distant from a major research HEI (D) schools, and how you can support us in working with more of these at about.imascientist.org.uk/widening-participation.

Scientist activity

Answers



Live Chat



Scientist	Profile views	Position
Matt Lee	1,326	Winner
Adam Hargreaves	987	2nd
Deborah Aitken	842	3rd
Samantha Ahern	774	4th
Adele Wratten	585	5th

Key figures from the Actinium Zone and the averages of the June zones

PAGE VIEWS	ACTINIUM ZONE	JUNE '17 ZONES AVERAGE
Total zone	22,827	20,354
ASK page	2,349	1,630
CHAT page	2,062	1,969
VOTE page	2,052	1,741

	ACTINIUM ZONE	JUNE '17 ZONES AVERAGE	IAS 2012-17 AVERAGE
Schools	14	14	10
Students logged in	537	498	381
% of students active in ASK, CHAT or VOTE	93%	89%	85%
Questions asked	819	622	709
Questions approved	350	271	306
Answers given	495	400	543
Comments	34	45	76
Votes	452	382	299
Live chats	19	21	16
Lines of live chat	9,828	6,525	5,315
Average lines per live chat	517	311	344

Popular topics

Students easily engaged with the scientists work, and the most common discussions within the chats were about Adam's work with venom and Matt's work with cancer.

There was a lot of interest in the different snakes Adam has worked with, what venom is made up of, how he measures the venom and how different people can react to the venom. He was also asked about the different animals he has worked with, like gerbils and sharks.

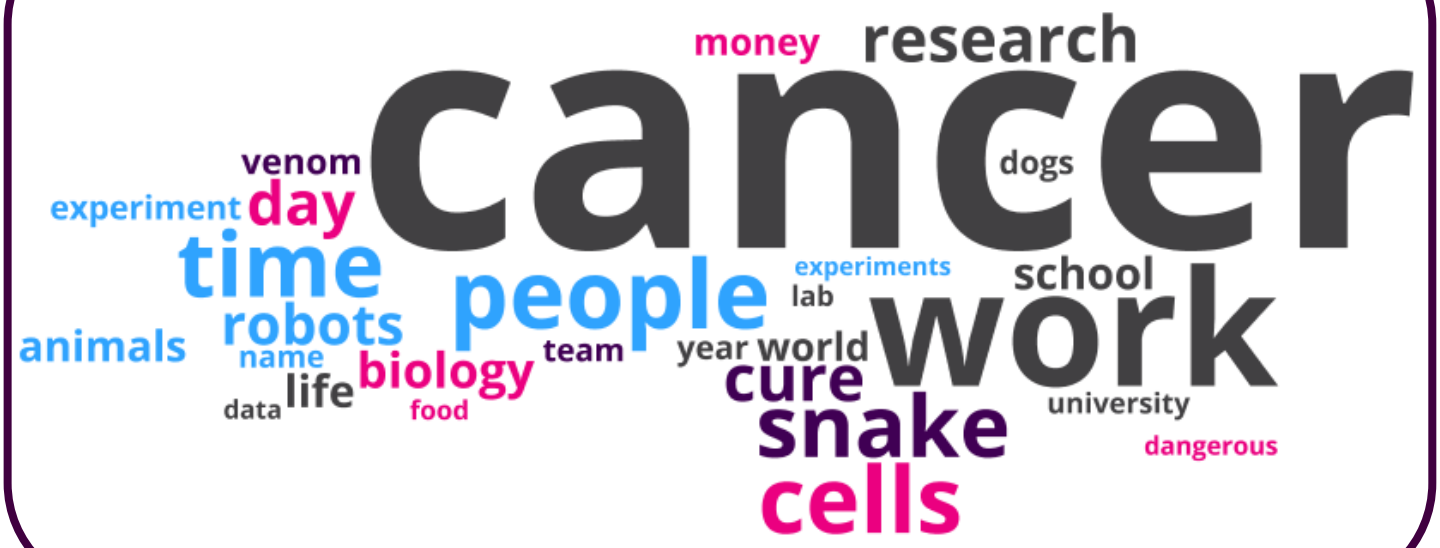
Matt's work with cancer cells was a very popular topic. Students asked Matt about the different cells he studies; what they look like, how they affect the body and how they mutate. Students were interested in the different types of cancer, how close we are to a cure and the different ways that cancer can be diagnosed. Lots of students asked Matt whether he was finding a cure for cancer and he was great at clarifying that his aim is to find out more about how cancer works, and explaining why he finds cancer cells so interesting and exciting.

Students showed an interest in Deborah's work using robots to teach healthcare skills, asking about how her CPR dummies work, how much they cost and the different robots and machines she uses. This theme captured students' imagination and there were more questions about the future of robotics, whether robots could aid people with disabilities and whether robots can have emotions.

There were also questions about being a scientist, the importance of their work and questions raising ethical or monetary concerns; for example about the use of laboratory animals or the high cost of health treatments.

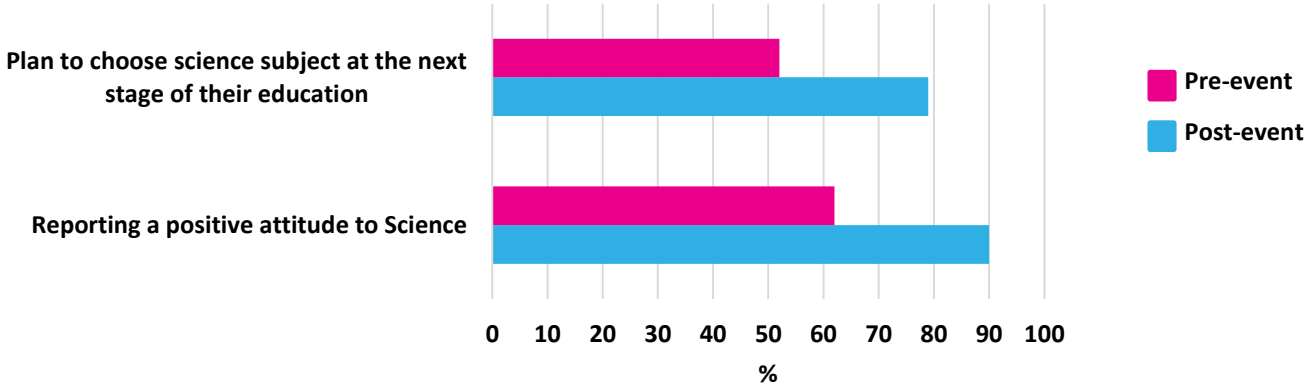
Chat

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



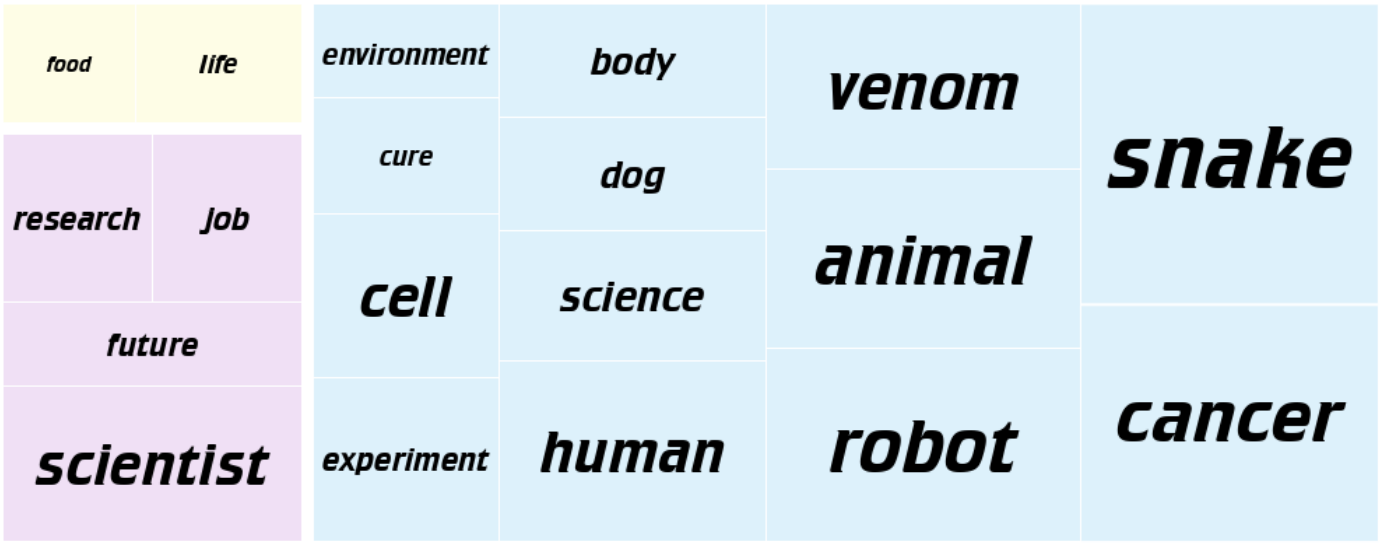
Students' attitudes to STEM

We ask students directly about how they feel about science, before and after taking part in the event. It's clear that participating in I'm a Scientist has an overall positive effect on students' attitudes to science:



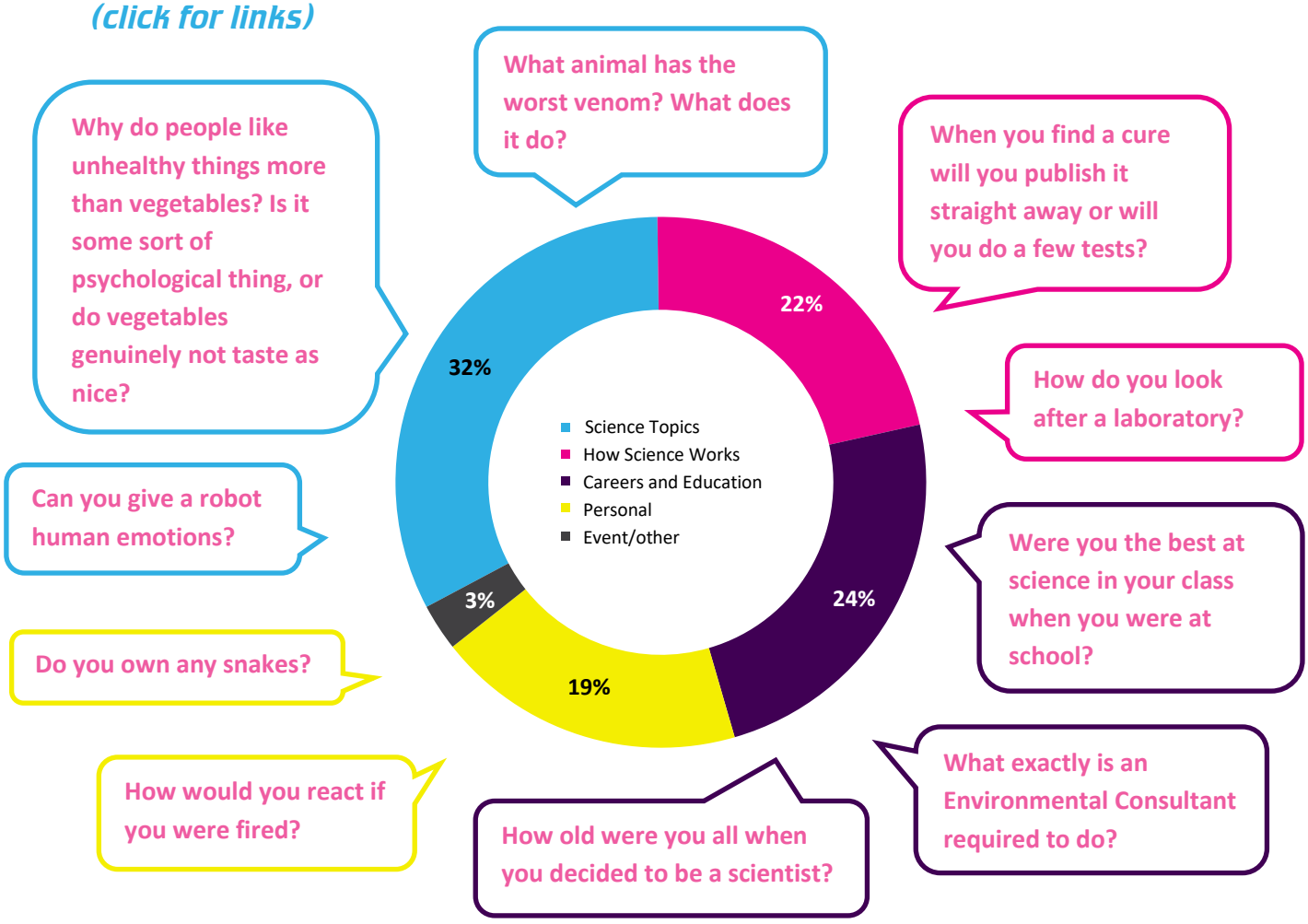
Figures are averages from *I'm a Scientist* Zones run between 2012 and 2015. We're still collecting feedback for June 2017, but we expect to see a similar positive change.

Top Keywords of questions approved in the Zone
Area represents frequency of use



Careers and Education | Science topics | Motivations | 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

MangorollaCIC
01225 326892 | michaela@mangorol.la

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Examples of good engagement

Students were really interested in the scientists' research, especially in Adam's work with animals:

"*What is your research on gerbils about?*" **– Student**

"*Gerbils get diabetes if you feed them what you would normally feed to mice. My work on them is trying to figure out what causes that, mainly through genome sequencing*" **– Adam, scientist**

"*Why would you choose to work on gerbils?*" **– Student**

"*I had a Skype with my old boss who told me about them and that they had a gene missing, which if you don't have you die. So he basically challenged me to find the missing gene, which I gladly accepted!*" **– Adam, scientist**

"*Have you found it?*" **– Student**

"*I have! It's there, just mega mutated*" **– Adam, scientist**

There was also a lot of curiosity about Deborah's work with robots, and the future of AI:

"*Will we ever have to allow robots rights? For example, if our coffee machine became self-aware, would unplugging him be considered murder? Also, using robots in resource collection (e.g. Mining for resources), would we have to pay them, otherwise, could it be considered slavery?*" **– Student**

"*Given that there are lots of rules about the treatment of animals (even ones that aren't self-aware like insects) there would have to be rules if robots were self-aware, yes. The robots would need to exist in conditions that were appropriate so while paying them might not be the way forwards, they would need somewhere to live etc. However, I suspect that if giving a machine self-awareness were possible then it would be strictly regulated to only things which needed to be self-aware to avoid learning that your only purpose is to pass the butter.*" **– Deborah, scientist**

Scientist winner: Matt Lee

Matt's plans for the prize money: "I *want to build an obstacle puzzle solving game that teaches people about different diseases and how scientists do experiments to understand those diseases. I will take the game into schools and to festivals, and will develop smaller board games and activities that can be left at the schools, and that people can take home, so that you can learn how experiments are done in your own school science classes or in your kitchen at home."* Read Matt's **thank you message.**

Student winner: Andy_B

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…

"[The students] loved it, a third are more likely to consider a science career too! " – **Teacher**

"This is soooooo fun i luv it! It makes science 2 times more fun because we can ask real scientists our questions" – **Student**