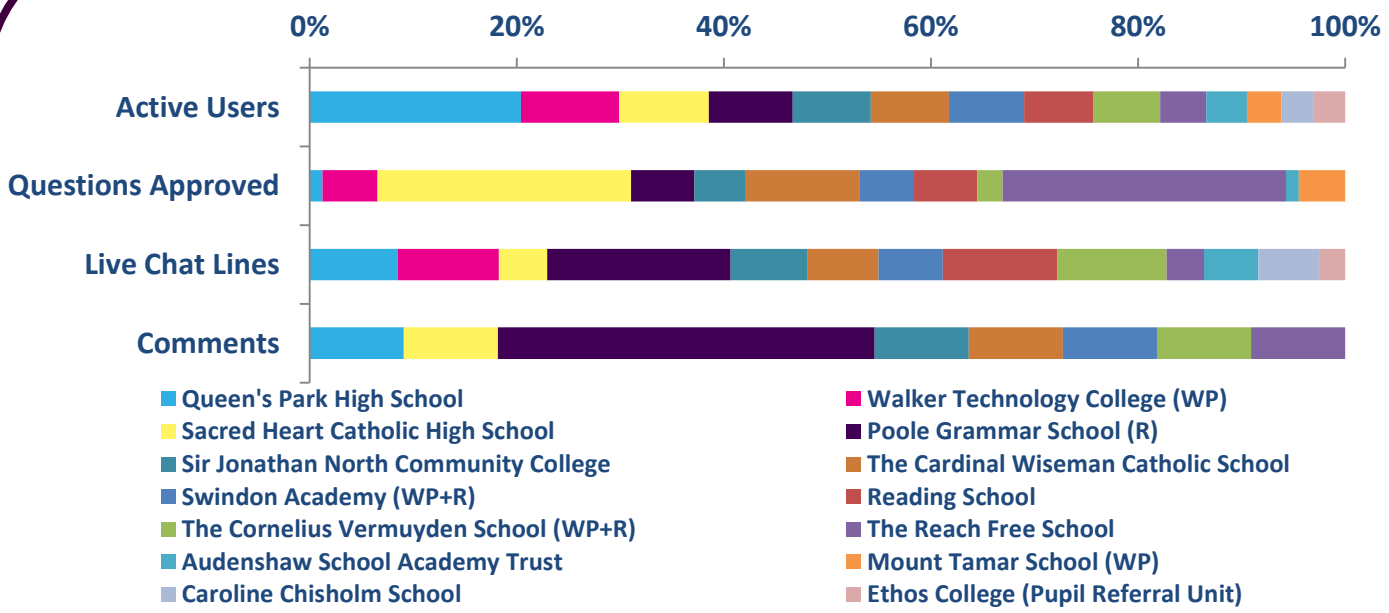
March 2017

The Francium Zone was a general science zone funded by Wellcome. Sandra is a molecular biologist working on making new proteins to help track cancer cells and Lewis, the winner of the zone, is a PhD student studying materials that absorb light and how this can be converted to electricity. James is a geophysicist that uses sound recordings to find layers in the Earth that are likely to contain oil, Humayra is a gastrointestinal scientist working for the NHS and Dakshat is a PhD student studying how men from different ethnic backgrounds age.

The questions in the ASK section covered all the topics the scientists work in, and many others on top. Live chats were mostly fast-paced with questions on lots of different topics. Lewis answered nearly 50% of all the questions in ASK and together with Sandra, wrote nearly 90% of all the live chat lines.

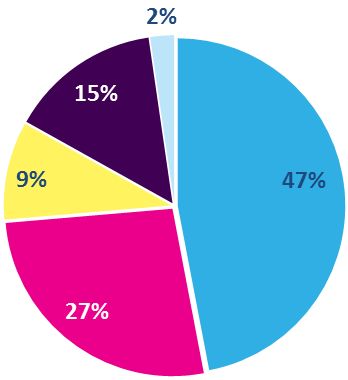
School data at a glance



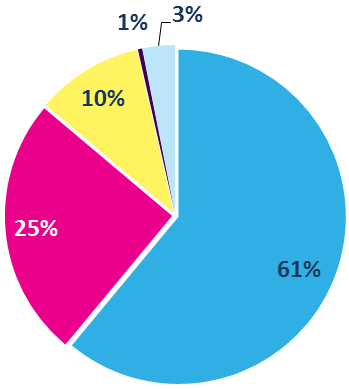
We want to increase the participation of under-represented groups going into STEM careers. Find out what we mean by our Widening Participation (WP) and Rural (R) schools, and how you can support us to work with more of these at about.imascientist.org.uk/widening-participation.

Scientist activity

Answers



Lines of Live Chat



Scientist	Profile views	Position
Lewis Wright	898	Winner
Sandra Greive	679	2nd
Martin James	481	3rd
Dakshat Trivedi	410	4th
Humayra E. Abdul-Razakq	442	5th

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

PAGE VIEWS	FRANCIUM ZONE	MAR '17 ZONES AVERAGE
Total zone	16,959	18,600
ASK page	1,158	1,451
CHAT page	1,671	1,703
VOTE page	1,670	1,523

	FRANCIUM ZONE	MAR '17 ZONES AVERAGE	IAS 2012-17 AVERAGE
Schools	14	13	10
Students logged in	455	455	376
% of students active in ASK, CHAT or VOTE	79%	80%	85%
Questions asked	574	594	713
Questions approved	245	276	307
Answers given	349	482	549
Comments	25	47	77
Votes	267	307	296
Live chats	17	17	15
Lines of live chat	7,369	6,543	5,265
Average lines per live chat	433	379	348

Popular topics

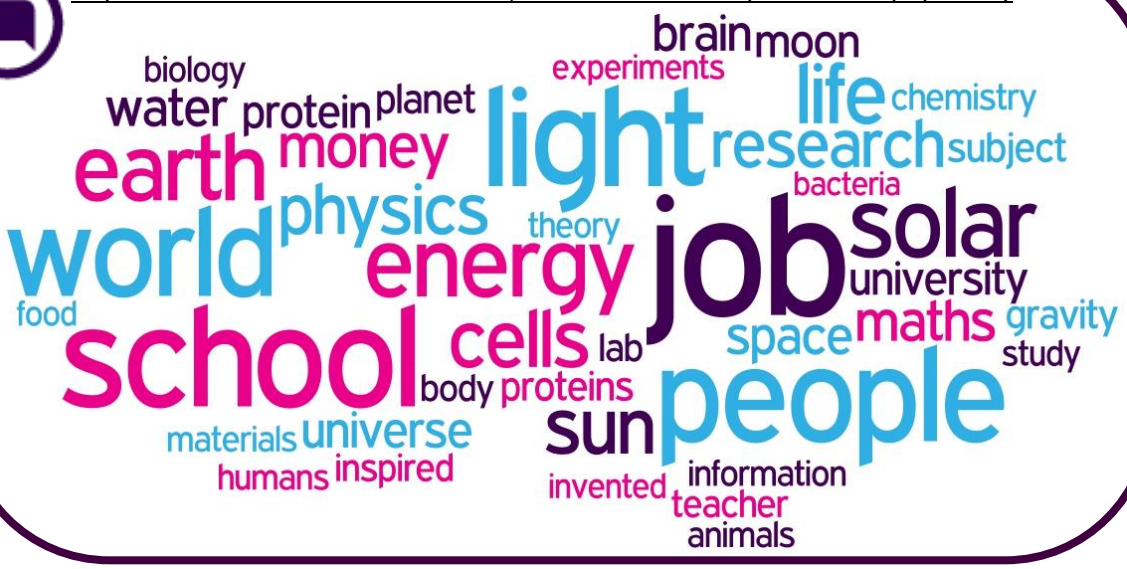
Students were interested in the life of a scientist, including how they got into their career and what they do day-to-day. They wanted to know how the scientists decided on their jobs, what their day to day work was like and how hard they had to work. They were asked their opinions on testing on animals and whether their work helps the environment.

The scientists all received specific questions about their individual areas of expertise, with James being asked what a geophysicist is and Dakshat about how different bodies age, as well as what happens to our bodies after we die.

There were lots of more general questions about science, especially about the environment, solar energy and global warming. Students and scientists bonded over things like gaming and food, and the scientists were good at finding things in common to talk about within the chats.

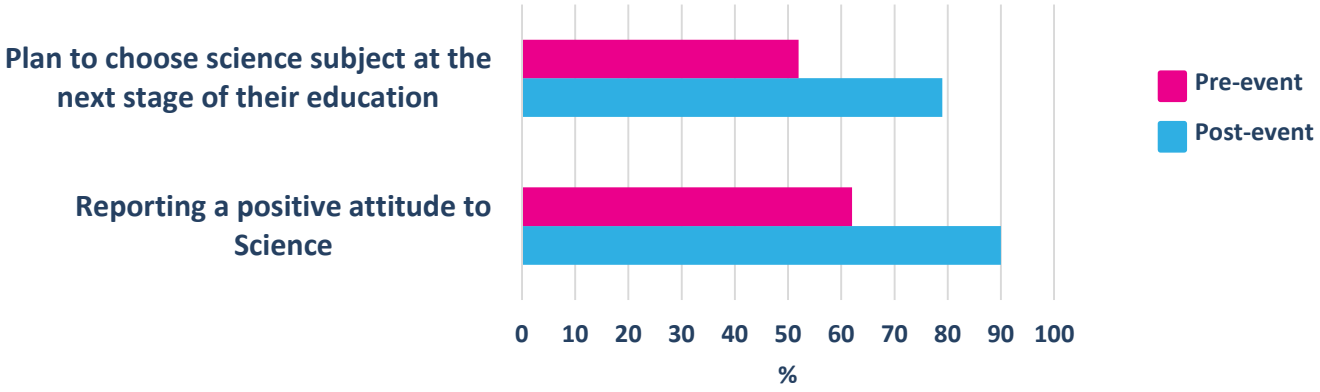
Chat

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



Students' attitudes to STEM

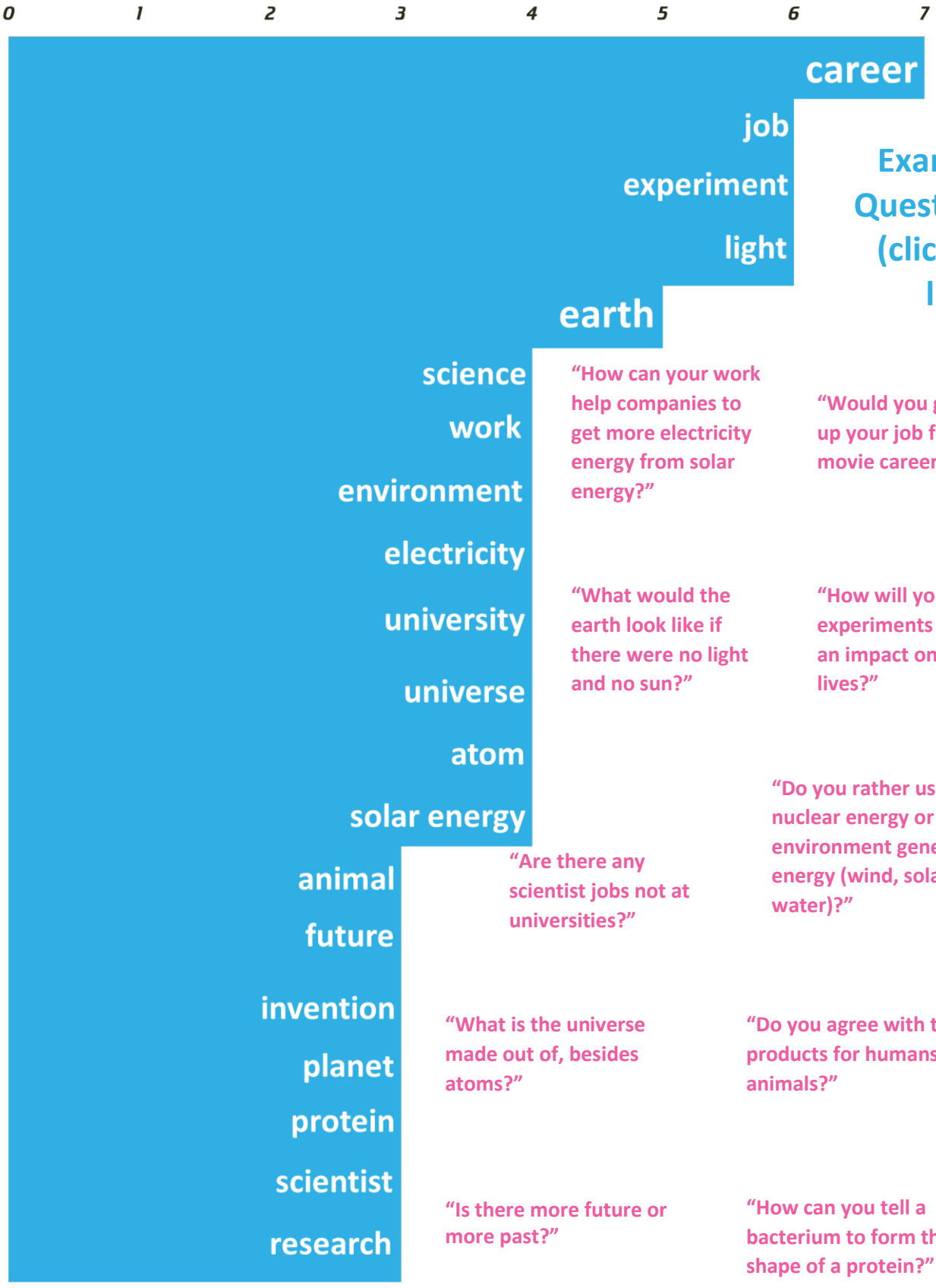
We ask students directly about how they feel about science, before and after taking part in the event. It's clear that participating in I'm a Scientist has an overall positive effect on students' attitudes to science:



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

Ask?

Keywords of questions approved in the zone, length of bar represents frequency of use



Example Questions (click for links)

"How can your work help companies to get more electricity energy from solar energy?"

"Would you give up your job for a movie career?"

"What would the earth look like if there were no light and no sun?"

"How will your experiments have an impact on our lives?"

"Do you rather use nuclear energy or environment generated energy (wind, solar, water)?"

"Are there any scientist jobs not at universities?"

"What is the universe made out of, besides atoms?"

"Do you agree with testing products for humans on animals?"

"Is there more future or more past?"

"How can you tell a bacterium to form the shape of a protein?"

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Examples of good engagement

Students asked for the scientists' opinions on controversial topics such as testing on animals, which led to some thoughtful conversations within ASK with students giving their own opinions too:

> *"Do you agree with testing products for humans on animals? (e.g. cosmetics and medicines)"* **– Student**
>
> *"Good question! We have to balance the potential or actual harm done against the potential for good outcome. It depends on your personal value system. Animal testing for cosmetics is not something I want to support and so I try to buy products that haven't been tested on animals. Animal testing is an important part of the process for development of new medical treatments. When this is done in a careful way so as not to cause unnecessary suffering and is conducted following strict guidelines, I believe the benefit outweighs the harm done."* – **Sandra, scientist**
>
> *"There's always the dilemma of whether the good of testing outweighs the impact on the animals. This is always a hot topic and many debates are held on this. Whether you think it's positive or negative, one positive thing is that the UK has some of the most strict regulations on this regarding animal protection in the world. Until there is a viable alternative, I personally am for animal testing, if it will potentially lead to medicines etc that can save lives."* – **James, scientist**
>
> *"Great! Testing medicines and cosmetics is definitely something I don't agree with strongly unless it's completely safe to the animal. This is both animal friendly and a good quality to have as a scientist!"* – **Student**

Scientist winner: Lewis Wright

Lewis' plans for the prize money: "*My favourite Youtube channel ever is Kurzgesagt (you should DEFINITELY check them out) - they talk about big, complex topics but make it super simple to understand. Also, their animations are excellent. I would put the prize money towards commissioning a video about photovoltaics by Kurzgesagt, so that more people can learn about solar cells."* Read Lewis' **thank you message.**

Student winner: Quantum Mechanics

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…

"It was lots of fun. The best thing about it is that all of the organisational part was done and all the time I spent was engaging with students in some way." – **Scientist**

"I was surprised at how engaged my students actually were. This is the first time our school has participated and our students loved the experience. They now have an appreciation that Scientist are real and "normal" people" – **Teacher**