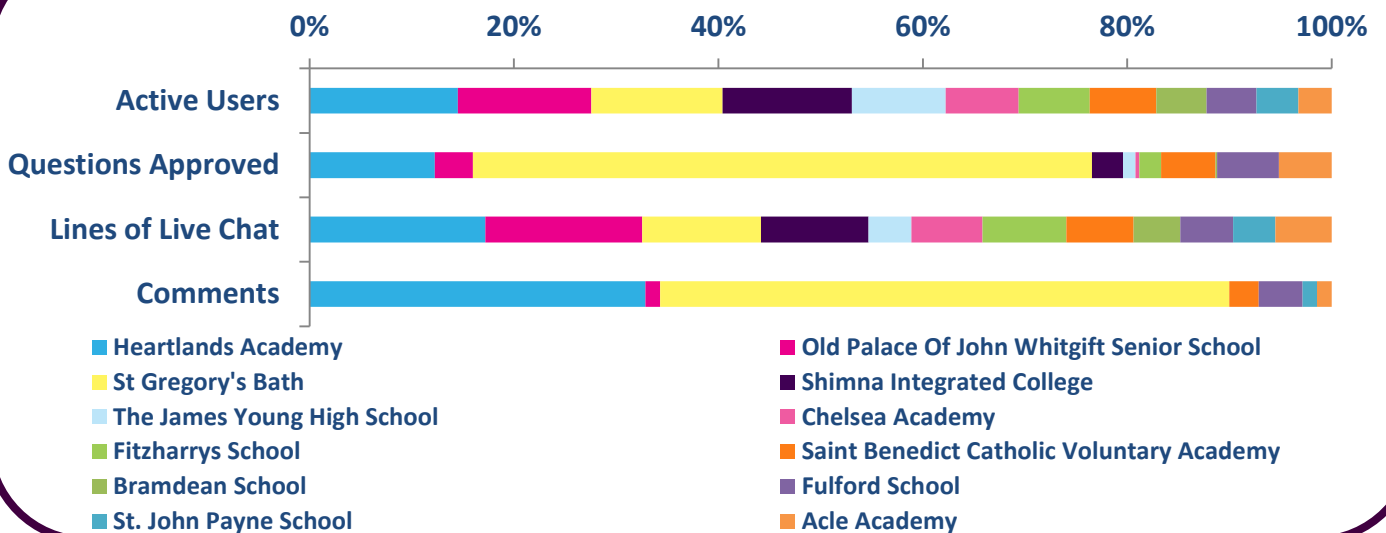




June 2015

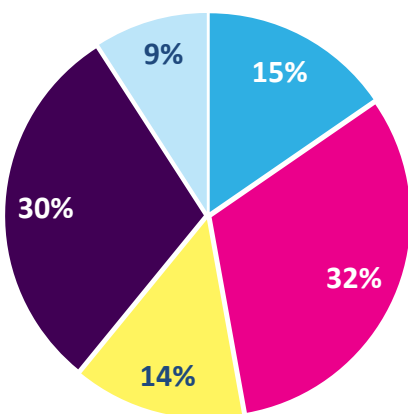
The Hafnium Zone was a general science zone funded by the Science and Technology Facilities Council (STFC). The Zone involved five scientists whose work was supported by the STFC, covering areas from neutrinos, to neuroscience, to computer programming to lasers. Question topics in the zone were very varied, reflecting the diverse research areas of the scientists. It was the busiest of the June zones (521 active students) and consequently had the most questions approved (563) and the most live chats of any zone (23). The scientists worked hard to match this high level of engagement, with nearly every live chat attended by at least 3 scientists. The personalities and good humour of all the scientists were evident throughout the event, in both live chats and ASK.

School data at a glance

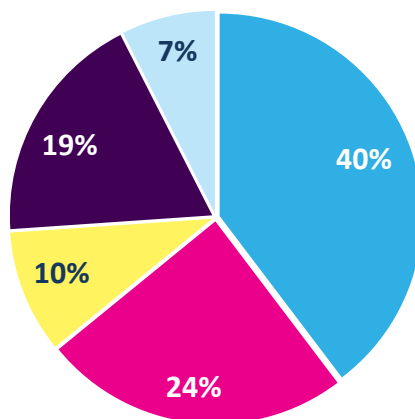


Scientists activity

Answers



Lines of Live chat



Scientist	Profile views	Position
Chris Armstrong	1,024	Winner
Rebecca Dewey	841	2nd
Josh Meyer	697	3rd
Susan Cartwright	705	4th
Rob Temperton	741	5th

PAGE VIEWS	HAFNIUM ZONE	JUNE '15 ZONES AVERAGE
Total zone	30,522	23,412
ASK page	2,388	1,818
CHAT page	3,918	2,946
VOTE page	2,697	1,587

	HAFNIUM ZONE	JUNE '15 ZONES AVERAGE	IAS 2012-15 AVERAGE
Students	555	411	342
% of students active in ASK, CHAT or VOTE	94%	91%	85%
Questions asked	1,197	805	702
Questions approved	563	358	302
Answers given	844	578	555
Comments	90	57	79
Votes	501	330	273
Lines of live chat	8,744	5,928	4,784
Live chats	23	18	14
Average lines of live chat	380	328	338
Schools	12	12	9

Popular topics

This was a very busy and diverse zone, with a good mixture of very insightful and less serious questions. The students had clearly read the profiles of the scientists which resulted in targeted questions relating to the area of research of each scientist. For example, Rebecca was asked many questions about the brain, Chris answered questions about X-rays and Josh was asked about computer programming.

As a general science zone, there were also many questions that covered a huge variety of fields from developmental biology, to future technologies, through to astrophysics. These often tested the expertise of the scientists who were usually open about their level of knowledge on different subjects. Students were also interested on what it was like to be a scientist and the careers of each scientist.



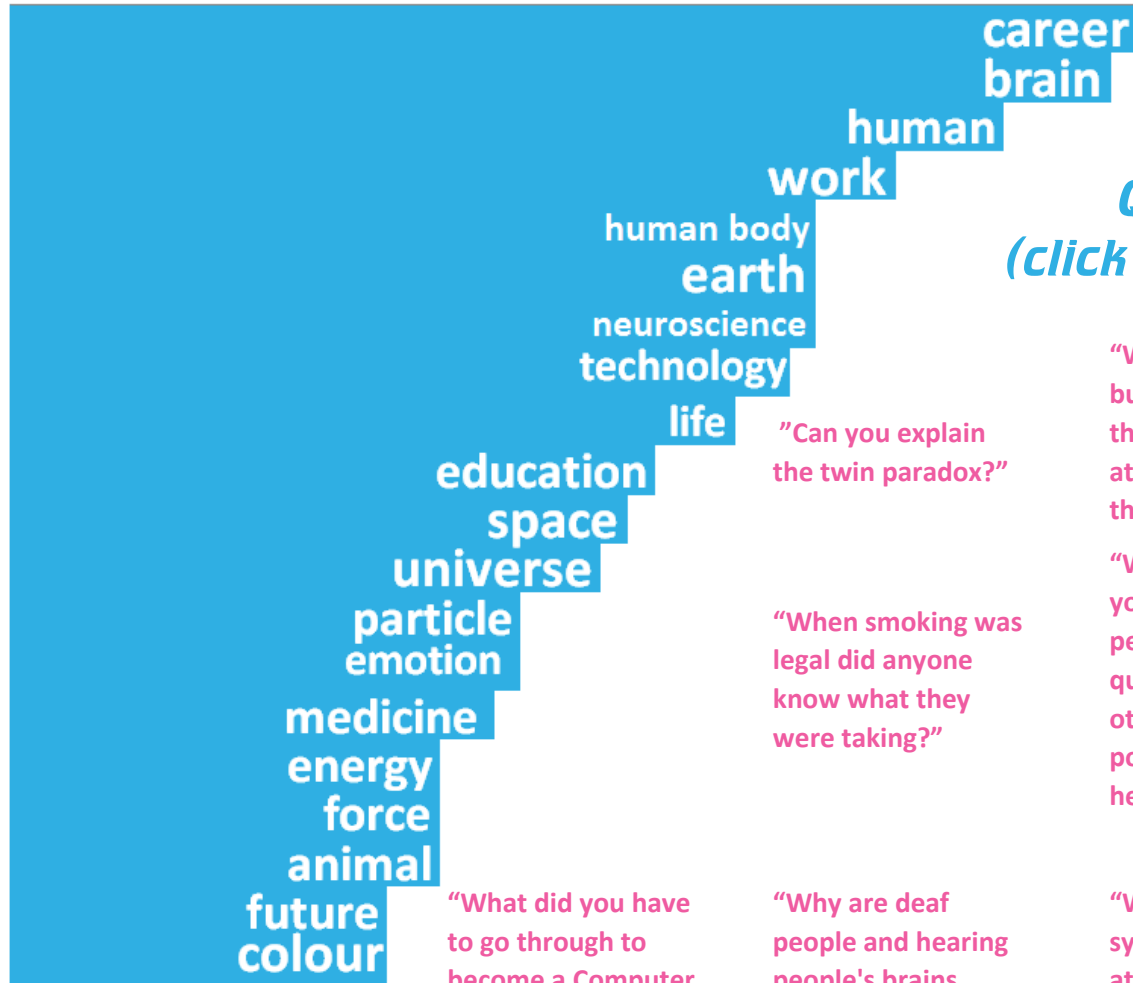
Keywords from live chats in the zone, size of the word represents its popularity



Ask ?

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

0 5 10 15 20 25 30 35 40



Example Questions (click for links)

“What other building blocks are there other than atoms? What do they build?”

“Why do very young and very old people get ill quicker than others? At what point does your health decline?”

“Why is the synchrotron better at X-rays than an X-ray machine?”

“How do we know all fingerprints are different if we haven't tested them?”

“If you had got a heart transplant would parts of your DNA change?”

“Can you explain the twin paradox?”

“When smoking was legal did anyone know what they were taking?”

“Why are deaf people and hearing people's brains different?”

“How can the brain sometimes read words even when the middle letters are not in the right order or are replaced by numbers?”

“How does fermentation work?”

education

space

universe

particle
emotion

medicine

energy

force

animal

future
colour

“What did you have to go through to become a Computer Programmer?”

“Why does light and sound travel in different types of waves and not the same?”

“How do human reflexes work and why?”

“What advice would you give to young budding scientists out there?”

“Why do you think neutrinos might hold the key to our understanding of why the earth is made up of matter and not antimatter?”

Examples of good engagement

The scientists were good at explaining difficult concepts and the realities of how science works:

“How much science is fact and how much is theory” – Student

“Science is observational data interpreted in a mathematical framework. The framework is the theory. Theory does not mean “guess” - theories are well tested frameworks that let you understand your data. A mere collection of facts is not science - as Rutherford said, it's stamp collecting” – Susan, scientist

“I agree with Susan. Scientific “theory” is not just an idea most of the time. In many cases, there is a large body of experimental evidence and mathematics to back them up. I think the confusion arises from phrases like “string theory” which have no observational evidence at all. I see how it is confusing” – Rob, scientist

The scientists used questions in both ASK and the live chat as opportunities to illustrate their personalities and sense of humour, and this was appreciated by the students:

“What is the rate of death for humans?” - Student

“There are 107 deaths per minute in the world. I googled it. Unfortunately the rate of death for humans is 100%. Sorry.” – Josh, scientist

“Chris, have you ever been injured in your workplace?” – Student

“I once got a paper cut from a paper I was desperate to find the conclusion of. Savage.” – Chris, scientist

“I like you Chris, you funny” - Student

Scientist winner: Chris Armstrong

Chris' plans for the prize money: *“Recently we took part in the Science Museum Lates event, and as part of our exhibit we have a laser system capable of popping a balloon. It's at best “iffy”, being only able to pop a few balloons before giving up for the night. Should I win, I'd like to purchase and build a more durable version of kit, I've had some ideas already on improvements to make but unfortunately people start asking questions if I just take lasers out of the lab... with the money I can purchase my own kit and no longer have to deal with those questions”.* Read Chris' [thank you message](#).



Student winner: Zealously

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...

“I think this chat idea is cool!!!!!!!!!!!!!! !!!” – Mia, student

“These scientists are bare inspirational” – Chaniyer, student



Chris.A
@TakesTheChris

Plenty of weirdly brilliant questions from the @imascientist chat today.