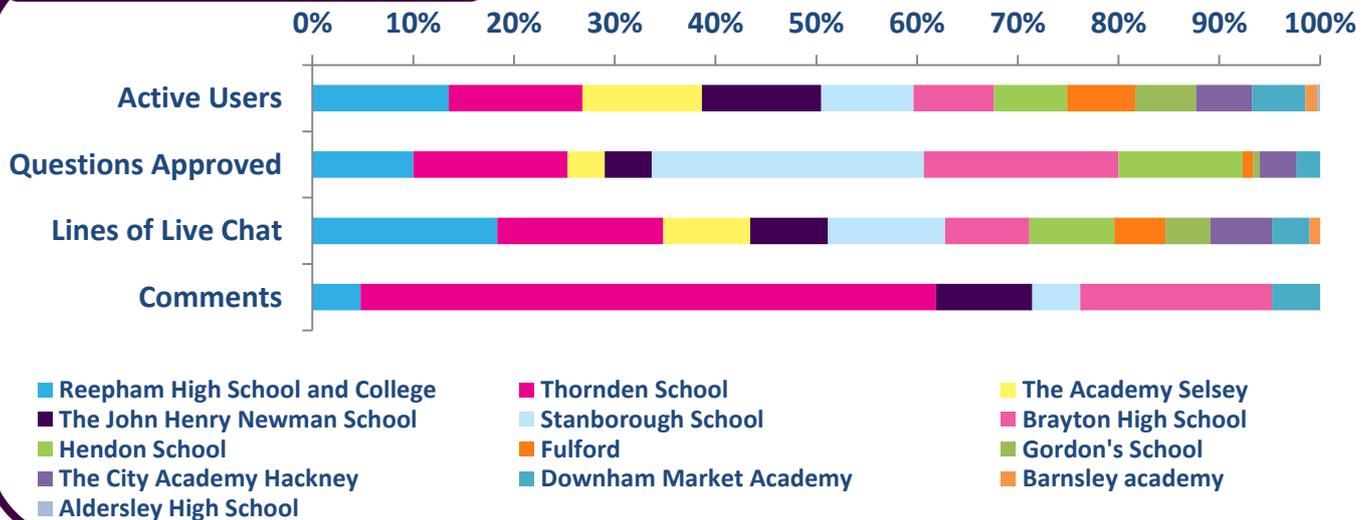




March 2016

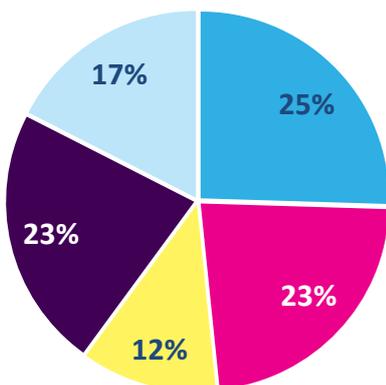
The Medical Physics Zone was funded by the Institute of Physics and Engineering in Medicine of which Paul, Mobeen, Jennifer and Greg were members and the Institute of Physics. Mobeen and Jennifer were members. Paul researches new ways of using light to treat skin diseases, Mobeen is working on ways of imaging the brain to pick out age related diseases, Laura is a clinical vascular scientist who studies arteries and veins, Jen is a radiotherapy physicist and Greg is researching new ways to detect cancer. The zone was quite busy with a higher than average amount of questions approved and answers given, although just 70% of students who logged in were active throughout the event. There was a lot of interest in health and disease, especially in the cancer research focus of the scientists. Paul and Greg, who came first and second, were the most active in the event, accounting for almost half of all ASK answers and three quarters of all live chat activity by scientists.

School data at a glance

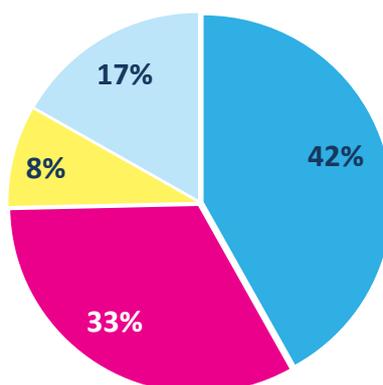


Scientist activity

Answers



Lines of Live Chat



Scientist	Profile views	Position
Paul O'Mahoney	1,653	Winner
Greg Melia	1,328	2nd
Mobeen Ali	1,050	3rd
Laura Haworth	1,120	4th
Jennifer Lowe	976	5th



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



Example Questions (click for links)

“Why do tapeworms show on 100 year old x-rays but not new ones?”

“Do scientists have to come up with a separate cure for each different type of cancer?”

“What does cancer actually do?”

“Why doesn’t radiation in cancer treatment damage the rest of the body?”

“How does gravitational time dilation affect the growth rate of cells?”

“How does iron accumulate in the brain?”

“What is narrowband ultraviolet light and why is it the most common form of phototherapy?”

“How do you get Alzheimer’s disease and is it curable?”

“What is more dangerous – a brain aneurysm or an abdominal aortic aneurysm?”

“How is it possible to cure cancer through light?”

“What is anti-matter?”

“Were you always the smartest kid in science and maths lessons?”

“How do you effectively explain procedures to patients that must undergo them?”

“How did life begin?”

“Do you believe it is pragmatic to continue spending millions on expensive NASA missions?”

“How long is a chicken pregnant for?”

Examples of good engagement

Scientists were encouraging and responsive to students' concerns about how difficult they found science subjects in school, giving useful advice:

"Physics is so hard is there any tips you have in how we can improve and understand?" – **Student**

"Pay attention in maths. A lot of physics and maths is basically the same subject so if you can do one, you get the other for free." – **Greg, scientist**

"I think not to worry about not understanding everything first time - I certainly didn't! It takes time and some studying but with patience it can make more sense (and become more enjoyable too!)" – **Paul, scientist**

"Try reading some popular science books - they might have cool pictures and have to explain things clearly. It will help explain things and remind you about why it's so interesting." – **Jen, scientist**

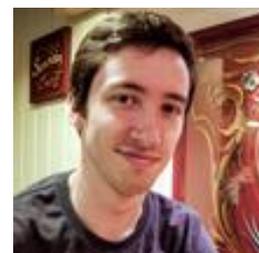
There was lots of interest in cancer, with students questioning what they had read on the scientists' profiles. Some of the questions asked were very in depth for a live chat but scientists were good at explaining their research simply and clearly:

"How do you treat skin disease with light? I thought you could get skin cancer from not protecting your skin from the sun? How does using the light cure the cancer?" – **Student**

"You're right, from overexposure to UV you can increase your risk of skin cancer, but by carefully controlling the wavelength and the amount of light you get, we can also use it as a treatment." – **Paul, scientist**

Scientist winner: Paul O'Mahoney

Paul's plans for the prize money: *"I'd try to collaborate with the local science centre in Dundee and come up with an exhibition or show that will teach people about using light in medicine. It's something I'm really interested in, and from speaking to other people they find it really interesting too. So it would be nice to show people more about using light in medicine and hopefully it would get young people more interested in science too!"* Read Paul's [thank you message](#).



Student winner: Katie

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 spoke to a living scientist
YAY I really enjoyed this
chat"* – **Student**

*"I thought it was a fantastic event and that I am
very happy to have been part of. I loved the
competitive side of it and I learnt so much from
the other scientists and the students."* – **Scientist**