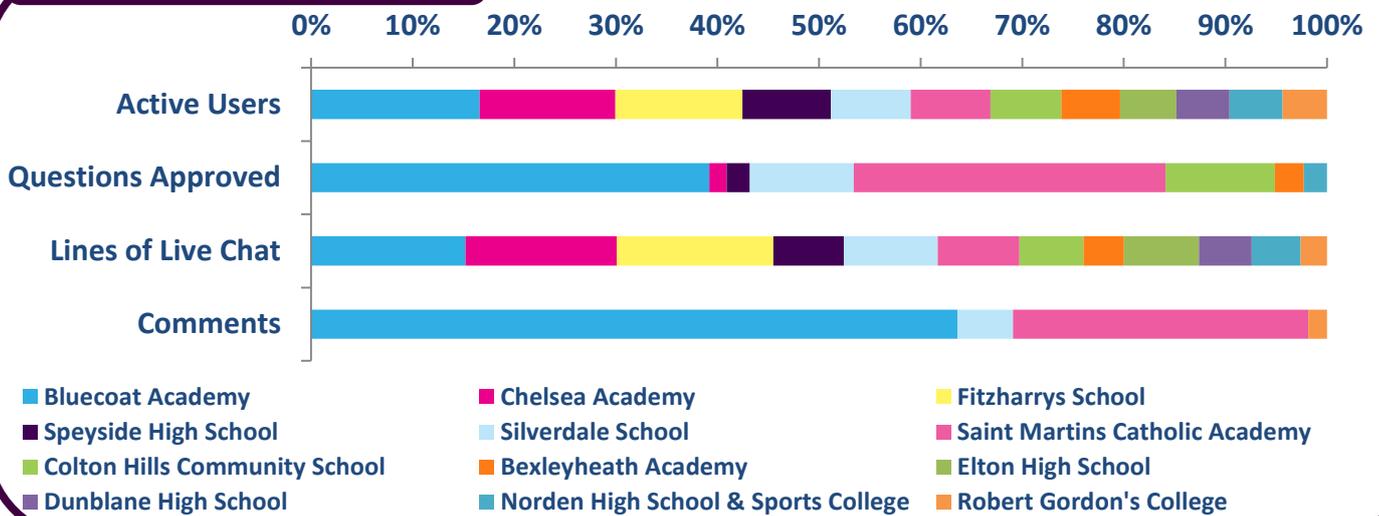




June 2015

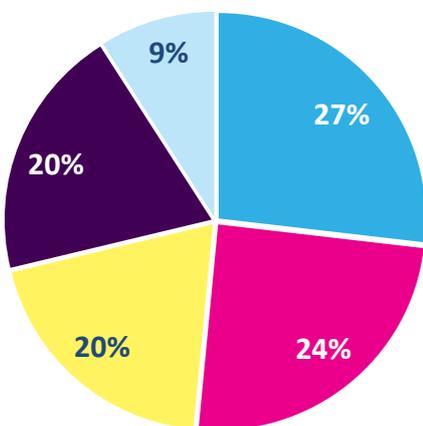
The Electromagnetic Zone was funded by the Science and Technology Facilities Council (STFC) and involved four scientists, Miranda, James, Freya and Daniel, whose work was supported by the research council. The research of the scientists encompassed a wide range of uses for the electromagnetic spectrum, from treating cancer to encrypting data. As such, questions in the Zone related to many different areas of physics. Although the zone had fewer questions than most of the zones in June, the live chats were the busiest of all the zones and the attending scientists did well to engage with sometimes challenging classes.

School data at a glance

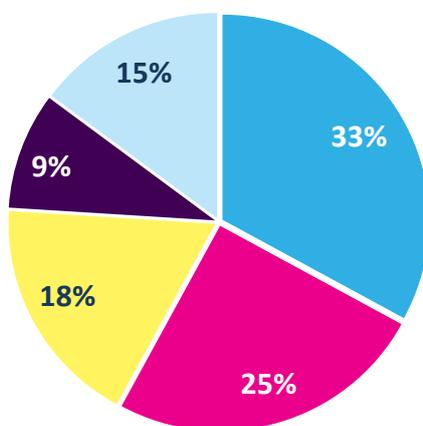


Scientist activity

Answers



Lines of Live chat



Scientist	Profile views	Position
James Gilbert	879	Winner
Usman Bashir	1,020	2nd
Freya Wilson	576	3rd
Miranda Jackson	485	4th
Daniel Hewson	544	5th



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

0 2 4 6 8 10 12 14



Example Questions (click for links)

- "I watched the Flash and I have a question, can a particle accelerator actually create a black hole or is it a load of mumba jumba?"
- "Why not leave this all to NASA? Do they not have as much money?"
- "Why are so many things hard to understand? Is it because our rules and theories are wrong? Does it mean our theories are always changing?"
- "Can you scientifically tell when you're going to die?"
- "If we created a super squashing machine with a high pressure from something like gold or heavier to make something so small that it becomes a black hole?"
- "Why leave this all to NASA? Do they not have as much money?"
- "Why are so many things hard to understand? Is it because our rules and theories are wrong? Does it mean our theories are always changing?"
- "If a black hole met a supernova what would happen?"
- "Do electromagnetic waves travel at different speeds?"
- "When clothes are wet why do they turn black"
- "Why were electromagnets made?"
- "How can scientist say dogs can only see in black and white what evidence proves this?"
- "Are parallel universes something you can travel to? If we did would it show us all that we could ever need to know?"
- "When using the PET/MRI scanner is it expensive to run?"
- "Do you think that there will be more robots in the world in the future?"
- "Will there be a point where the universe stop expanding and will start to shrink?"
- "Why have science to predict everything and live in fear when it would be better to live life as an adventure and take things as they come?"

Examples of good engagement

All the scientists were good at engaging in the live chats, some of which were quite busy and challenging. The scientists often shared details about their personal lives which helped humanise them to the students. For example, here James shares his uncertainty about his career direction when he was younger and even now:

“Did you want to be a scientist when you were younger or something else?” – Student

“Actually I wanted to be a vet for a while” – James, scientist

“How did you become a scientist if u wanted to be a vet” – Student

“I knew I wanted to do something techy, something inventive. I never thought I'd be a 'scientist'. I still don't know what I want to be really! I realised being a vet wouldn't be a very creative career, so that was the end of it. My chemistry teacher was upset!:)” – James, scientist

Likewise Usman’s hospital experience was interesting to the students and he was honest about how this had affected him:

“What is the most interesting thing you have witnessed in your job?” – Student

“Ahhh you don't wanna know .. hehehe it was disgusting” – Usman, scientist

“I want to know” – Student

“Brace up .. a guy had his groin ripped apart by a factory machine , I assisted the surgery in which he was stitched back ... EWWWWW I nearly fainted during the surgery and had to be excused”– Usman, scientist

Scientist winner: James Gilbert

James’ plans for the prize money: *“As a way to get school students thinking about what might be useful to take to Mars in the future, I'd fund a high-altitude balloon project to send a range of student-designed experiments right into the heart of our harsh stratosphere, where the air is thin, the (electromagnetic!) radiation is high and the temperature is low. Just like on Mars :)”*



Read James’ [thank you message](#).

Student winner: HerpDerp

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...

‘Thanks for the enlightening answers - this was a collision of fun and Science!’ – AJM, Student

‘WOW I never knew that, I have learnt something today’ - Spanish Inquisition, Student



James Gilbert
@labjg

Just want to say how much fun I'm having doing #IASUK! This arvo's chat with @stmartin1963 Yr8 was awesome 8)