



Kathryn



Graeme



Chris



Anne



Agnes



Adam

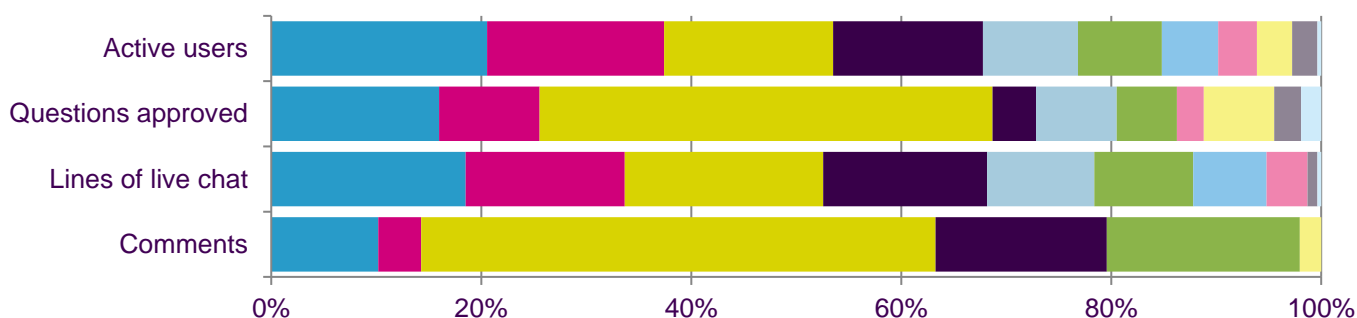
November 2018

The Einsteinium Zone was a general physics zone supported by the Science & Technology Facilities Council and featured six scientists:

- Kathryn Harriss, from the University of Kent, investigates impacts between two objects at very high speed
- Graeme Poole, zone winner, an astrophysicist studying meteorites to discover how the solar system began
- Chris Davies uses data to fix problems and improve quality issues in the steel industry
- Anne Green is a physics professor looking for dark matter as part of her research
- Agnes Wojtusiak is a laser scientist at STFC who performs an array of different experiments and creates computer models
- Adam McGuinness uses lasers to analyse the contents of the vesicles sent by cells to each other

This was a very busy zone, receiving over 25,000 views over the course of the activity. Students were interested in discussing physics topics such as space, matter and computing, but also wanted to get to know the scientists on a more personal level.

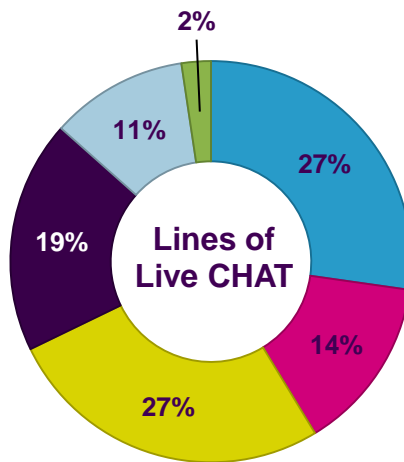
School data at a glance



- Stranraer Academy, Dumfries & Galloway (U)
- Ysgol Rhosnesni, Wrexham (U)
- Brayton Academy, Selby (U)
- Levenmouth Academy, Fife (WP/U)
- St Mary's Christian Brothers' Grammar School, Belfast (WP/U)
- Thorpe St Andrew School and Sixth Form, Norwich (U)
- St Alban's Catholic High School, Ipswich (U)
- Somervale School, Radstock (U)
- Harris Invictus Academy Croydon, Croydon (WP)
- Prendergast Ladywell School, London (WP)
- Wirral Metropolitan College, Birkenhead

We want to increase the participation of under-represented groups going into STEM careers. Find out what we mean by our under-served (U) and WP schools (WP), and how you can support us in working with more of these at about.imascientist.org.uk/under-served-and-wp

Scientist activity



| SCIENTIST | PROFILE VIEWS | POSITION |
|-----------------|---------------|----------|
| Graeme Poole | 1,005 | Winner |
| Adam McGuinness | 863 | 2nd |
| Agnes Wojtusiak | 776 | 3rd |
| Kathryn Harriss | 1,019 | 4th |
| Anne Green | 583 | 5th |
| Chris Davies | 864 | 6th |

Key figures from the Einsteinium Zone and the averages of the November zones

| PAGE VIEWS | EINSTEINIUM ZONE | NOV '18 ZONES AVERAGE |
|-------------------|------------------|-----------------------|
| Total zone | 25,873 | 18,272 |
| ASK page | 1,924 | 1,482 |
| CHAT page | 1,653 | 1,443 |
| VOTE page | 957 | 742 |

Popular topics

As this was a general physics zone, the questions ranged from specific (regarding the scientists' research) to the very broad.

'Space' was a popular keyword in both ASK and CHAT, used in questions about Graeme and Anne's research and also more general questions about the universe.

Students would ask what the scientists were like in school: 'Did you like science lessons at your school?', 'Did you ever get detention in school?' and 'Did you like school?' were frequent questions. Students could be quite shocked to learn that the scientists' weren't always interested in science, or were not straight-A students!

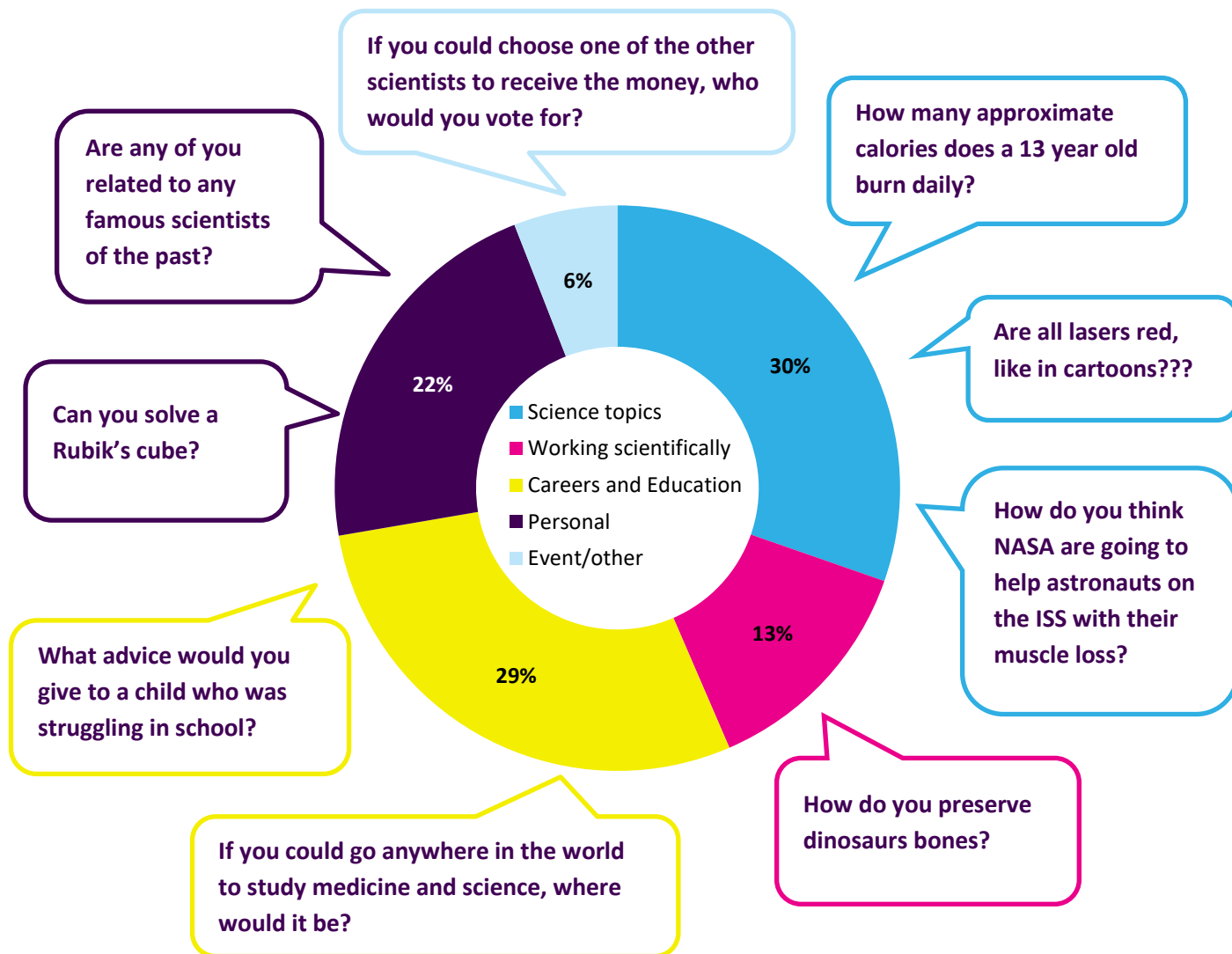
In ASK there were questions about careers and education, but also those concerning the scientists' 'life' and 'spare time', with students wanting to know about their hobbies and interests outside of science.

'Food' was surprisingly popular keyword in ASK, as it didn't relate to any of the scientists' areas of research. Example 'food' questions were "Do you like <food item>" or "Is pineapple on pizza wrong?", with students getting to know the scientists on a personal level.

| | EINSTEINIUM ZONE | NOV '18 ZONES AVERAGE | IAS 2012-18 AVERAGE |
|--|------------------|-----------------------|---------------------|
| Einsteinium Zone Schools | 11 | 10 | 10 |
| Students logged in | 597 | 471 | 391 |
| % of students active in ASK, CHAT or VOTE | 90% | 87% | 86% |
| Questions asked | 884 | 711 | 690 |
| Questions approved | 313 | 337 | 302 |
| Answers given | 851 | 585 | 539 |
| Comments | 89 | 57 | 74 |
| Votes | 508 | 378 | 307 |
| Live chats | 26 | 21 | 16 |
| Lines of live chat | 13,420 | 8,300 | 5,642 |
| Average lines per live chat | 516 | 395 | 358 |

Question themes and example questions in the Zone

Find out about how we've coded the questions at about.imascientist.org.uk/student-question-coding



Examples of good engagement

Students were interested in Agnes's research using lasers, and one student asked Agnes questions that may not have appeared in-depth or particularly scientific, but Agnes's responses taught him the size of her laser, its current capability and a prediction for the future:

"@Agnes can you make a lazar gun" – Student

"Well, our laser is the size of an entire classroom... can you hold a gun that big? ;)" – Agnes, scientist

"Yeh ;)" – Student

"can the lazars destroys planets" – Student

"Maybe one day... But not our ones, not yet anyway... ;)" – Agnes, scientist

"then ill take 5" – Student

"I don't think 5 lasers will destroy the planet either... ;P" – Agnes, scientist

"Thanks for the questions everyone!!" – Agnes, scientist

"@all thanks and good luck maybe one day lazars can destroy planets" – Student

Students often start the activity believing that scientists have to know about everything in order to do their work. When scientists show that there are parts of science that they don't understand, it helps students see scientists as normal people 'like them', contributing to the students' science capital*:

"Is there anything you don't understand about science???" – **Student**

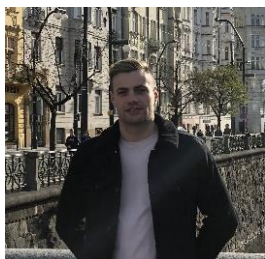
"Sooooo much!!" – **Graeme**

"What parts do you mostly not understand" – **Student**

"Very mathematical parts of physics go right over my head" – **Graeme**

"okay" – **Student**

Scientist winner: Graeme Poole



Graeme's plans for the prize money: *"Fund a UK lecture tour around the most disadvantaged areas to encourage the next generation of scientists."*

Read Graeme's **thank you message**.

Student winner: Code: Agent Zero

For great engagement during the activity, 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 about the Einsteinium Zone...

A much needed reminder of why I decided to become a scientist. – **Anne, scientist**

Taking part in *I'm a Scientist* has shown me how vital it can be for us scientists to promote our own research and inform the public (who are ultimately funding many of us through taxes). Moreover, it is such an incredible tool to inspire and engage with the next generation of young scientists still at school. – **Graeme, zone winner**

*Science capital is a measure of someone's engagement or relationship with science, how much they value it and whether they feel it is 'for me'. More info at imascientist.org.uk/science-capital

Feedback

Here are a few of the comments made about November's *I'm a Scientist* activity...

The students were actually cheering when the first scientist answered a question. It was a fantastic moment. – **Teacher**

I have learnt about other scientists' lives and that even if they are scientists they have the same life as us. – **Student**

The whole event probably involved more students from a wider variety of backgrounds than any single real-life event. – **Scientist**

I have learnt that many scientists did not have any clue as to what they wanted to be when they left school. – **Student**

I would like to say thank you. Friday when our children went on the live chat, there was so much excitement with the children when they saw the scientist replying. The buzz they got from it was fantastic. It is a long time since I've seen children buzzing from science. – **Teacher**

I have learned that science isn't just sitting with some test tubes pouring them into a big pot and that they are real, rather interesting jobs that I could consider going into. – **Student**