



Sarah



Isaac



Hira



Elena



Anisha



Alex

November 2019

The Meitnerium Zone was a general science zone, supported by Wellcome. The University of York Psychology department also provided funding for 10 classes and a researcher to take part. There were six scientists in the zone:

- Sarah Knight works at the University of York, exploring why we get distracted by background noise when we're trying to listen to another person speaking
- Isaac Halstead is a PhD student looking at the psychological factors of gene editing attitudes - what makes a person support or oppose its use
- Hira Virdee is a space laser scientist, using lasers to increase the power of satellite solar panels
- Elena Maters, the winner of this zone, is studying how volcanoes affect our environment and why ash particles from different volcanoes influence chemistry and clouds
- Anisha Wijeyesekera is studying how diet can impact the bacteria in our gut, and how this can positively or negatively influence our health
- Alex Leide looks at how ceramics break at the nanoscale, to help design stronger materials

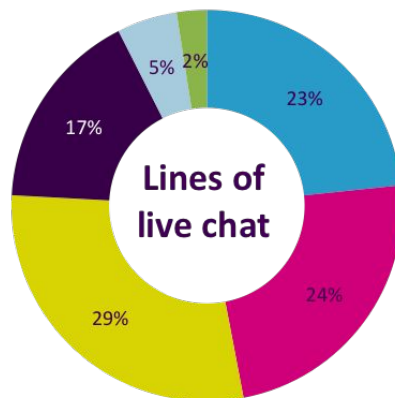
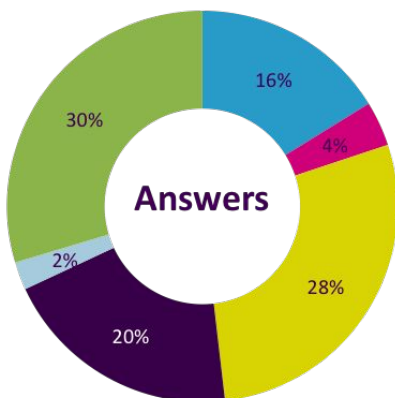
Key figures

A higher than average number of students logged into this zone, although ASK was relatively quiet with 280 question.

Due to it being a general zone, topics of conversations were varied. Students were interested in the scientists' individual research areas, especially Elena's work with volcanoes and Sarah's research into sound.

	MEITNERIUM ZONE	NOV '19 ZONES AVERAGE	2012-19 ZONES AVERAGE
Schools	8	10	10
Students logged in	383	368	289
% of students active in ASK, CHAT, VOTE, or comments	91%	91%	87%
Questions asked	280	571	659
Questions approved	112	262	291
Answers given	216	457	525
Comments	30	45	69
Votes	303	294	307
Live chats	18	18	17
Lines of live chat	6657	6334	5771
Average lines per chat	370	352	356

Scientist activity



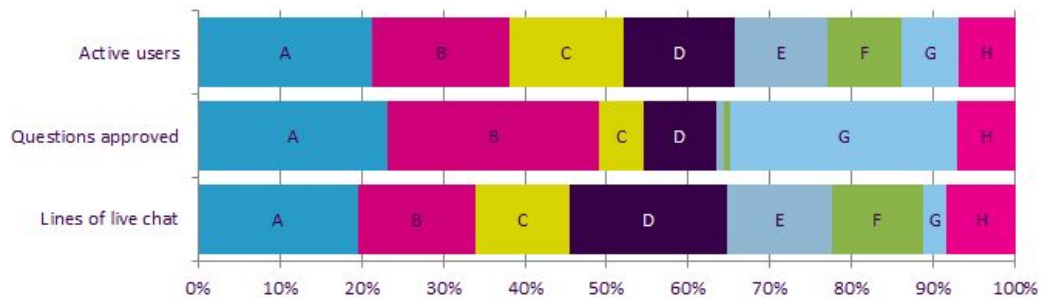
SCIENTIST

PLACE

- Elena Maters
- Isaac Halstead
- Sarah Knight
- Alex Leide
- Hira Virdee
- Anisha Wijeyesekera

- 1st
- 2nd
- 3rd
- 4th
- 5th
- 6th

School activity



	YEAR GROUP(S)	CLASSES
A Outwood Academy Shafton, Barnsley (WP/U)*	7, 8,9	3
B City Academy Whitehawk, Brighton (WP)	6	2
C Arboretum Primary School, Derby (WP)*	5, 6	2
D Longbenton High School, Newcastle-Upon-Tyne (WP)*	7, 8	2
E Irchester Community Primary School, Wellingborough	5, 6	2
F Smithycroft Secondary School, Glasgow City (WP)	7, 9	2
G Pennine Way Junior Academy, Swadlincote (WP)	3, 5	2
H Beech Hill Community Primary School, Wigan (WP/U)*	5	1

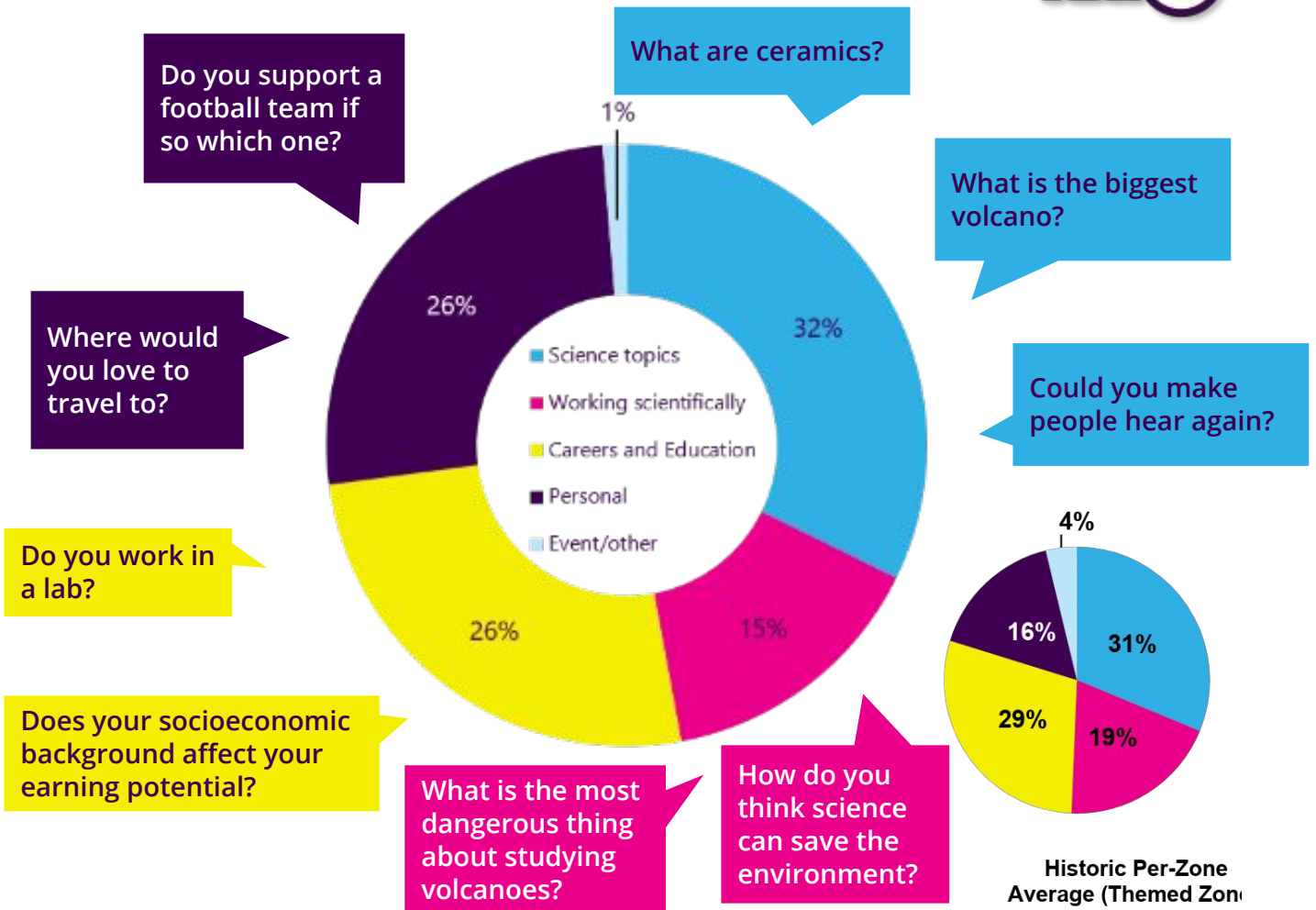
We have found that schools that are more than 30 minutes travel time from their closest Higher Education Institution are less likely to receive visits and benefit from engagement activities. We give priority to underserved (U) and widening participation (WP) schools when allocating places. Find out more about our research at <https://about.imascientist.org.uk/2017/school-engagement-in-stem-enrichment-effect-of-school-location/>

* Schools with classes funded by the University of York Psychology Department as part of their outreach programme.

Frequent words used in live chats by students and scientists



Question analysis





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Examples of good engagement

Within chats, students and scientists had some great conversations about careers, such as in this example where Sarah talks with a student about careers in science, as well as being a footballer:

"If you had to change your job, what would you do?" – Student

"Hmm, tricky one. My dream job would actually be to write crosswords! I love crosswords and sometimes write them for my friends, it's great fun :-). But more realistically, I guess I'd do something with number, like be a statistician or data analyst. What about you?" – Sarah, Scientist

"Preferably a footballer, but if not I would like to do the same job as my sister, a biomedical scientist :)" Student

"Footballer: excellent! Which team do you support? Biomedical science is cool! I hope your sister's enjoying it :-)" – Sarah, Scientist

"Newcastle United what about you? And I think she really likes her job. It is interesting when she talks to me about it!" – Student

"Crystal Palace, although I don't follow football that closely these days. More of a cricket fan! Do you know what your sister works on?" – Sarah, Scientist

"I think she looks at samples, in a hospital, and figures out what diseases or viruses they have! Also, she told me her job can be very dangerous as she can sometimes deal with deadly diseases!" – Student

In ASK, scientists gave detailed answers, showing they value the students' questions. Some students would comment with their own opinions, such as in this example of a conversation about favourite inventions. The scientists respond to the students comment, sharing interests and finding things in common – a key part of Science Capital:

"What is your favourite invention?" – Student

"There are far, far too many incredible inventions to mention here! But as a hearing scientist, I'm always amazed by cochlear implants. These are devices which can be put into the ears of deaf people to help them hear if they want to. Cochlear implants don't give perfect hearing — it isn't like popping on a pair of glasses when you're a bit short-sighted — but they do allow people to hear sound, speech and music!" – Sarah, Scientist

"I think the internet is the best invention – it has really changed the world beyond what could have been imagined before it was invented. If I imagine my life without the internet it would be a LOT more difficult and it would be very different." – Alex, Scientist

"Mine is the steam locomotive, it is just so amazing that steam can power a 100 ton train." – Student

"I love steam locomotives too actually 😊 I like the Mallard!" – Sarah, Scientist

"I enjoy watching all the different levers and pistons of steam engines to work out how it works; which levers are pushing other parts to spin different wheels... It's really cool! A new steam car world record was set in 2009 at nearly 140 mph! And almost all power stations still use steam to make electricity from steam turbines." – Alex, Scientist



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Scientist winner: Elena Maters

Elena's plans for the prize money: *"During my next field trip I would like to visit local schools to tell students about volcanic hazards and using instruments like drones to monitor and collect ash and gases. This will help our research to have a positive impact in vulnerable communities affected by volcanic activity."*

Read Elena's [thank you message](#)

Student winner: Cara

As the student winner, Cara will receive a certificate and a gift voucher.

Feedback

We're still collecting feedback from teachers, students and scientists but here are a few of the comments made about November's *I'm a Scientist*...

Both classes absolutely loved taking part and my class actually clap at the end of the live chat...This project encourages a greater understanding and interest in science. Pupils see scientists as real people with interests like their own. It breaks down the stereotypes around the career. Taking part also encourages the pupils to think about the world of work and future careers.

— Teacher

We had our first live chat today and the students loved it!! It was so lovely to see them so engaged with the live chat and some of their questions were fab!

— Teacher

I particularly enjoyed the live chats with classes because the engagement was totally led by them and it was a lot of fun to chat about such a variety of things, from being a researcher, to their questions about dementia, to our favourite snacks, to Netflix - I'll miss doing them a lot! And, in chats, there were some questions that came up frequently, which has given me a better idea of some of the concerns/questions of younger people.

— Scientist

I'm a Scientist has changed my perspective on science

— Student