
William


Thibaut "Tibo"


Harry


Georgia


Emily


Aimee

November 2019

Elements Zone was a themed zone funded by the Royal Society of Chemistry in line with International Year of the Periodic Table. There were six chemists, all RSC members, using a range of elements in their work:

- William Wiseman is a technical manager in industry who mixes zirconium with metal oxides to create ceramic materials used in places such as aeroplanes and oil rigs
- Thibaut Deviese is a chemist who uses the radioactivity of carbon isotopes to help archaeologists date objects
- Harry Wilkinson is a PhD student recreating iron and sulphur compounds usually found in the body with the aim of replacing unsustainable industrial processes
- Georgia Orton is a research scientist trying to make iron do the job of platinum in reactions using tiny cage structures called MOFs (metal organic frameworks)
- Emily Sparkes is a PhD student who studies how well enzymes make and break bonds between silicon and oxygen
- Aimee Egglestone is an industry development chemist helping scientists to scale up their experimental reactions using carbon compounds to industrial levels

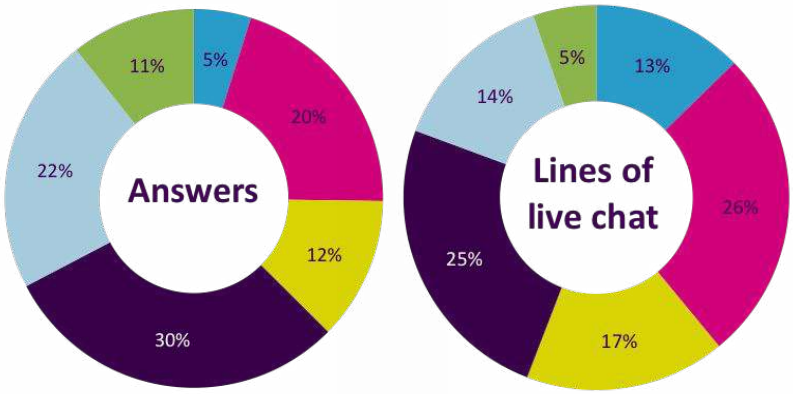
Key figures

The six scientists in this zone gave a huge 900 answers in ASK between them - almost twice as many answers as the average from this event.

The zone was on topic, with lots of conversations around chemistry and elements used in the scientists' work.

	ELEMENTS ZONE	NOV '19 ZONES AVERAGE	2012–19 ZONES AVERAGE
Schools	10	10	10
Students logged in	326	368	389
% of students active in ASK, CHAT, VOTE, or comments	96%	91%	87%
Questions asked	520	571	659
Questions approved	376	262	291
Answers given	900	457	525
Comments	73	45	69
Votes	270	294	307
Live chats	18	18	17
Lines of live chat	5292	6334	5771
Average lines per chat	294	352	356

Scientist activity



SCIENTIST	PLACE
Harry Wilkinson	1st
Georgia Orton	2nd
Emily Sparkes	3rd
Aimee Egglestone	4th
Thibaut Deviese	5th
William Wiseman	6th

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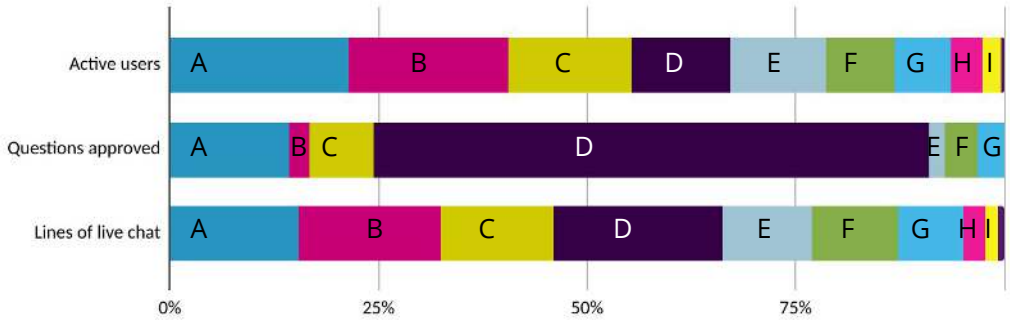
School activity



		YEAR GROUP(S)	CLASSES
A	St Dominic's High School, Belfast	8	4
B	The Holmesdale School, Snodland (U)	7	2
C	Slemish College, Ballymena (WP)	8	2
D	John Flamsteed Community School, Ripley (U)	8	2
E	Smithdon High School, Hunstanton (U)	7	3
F	Sandymoor, Runcorn (WP/U)	8	3
G	Whalley Range 11-18 High School, Manchester (WP)	10	2
H	Berkshire College of Agriculture, Maidenhead	10, 11	2
I	Wirral Metropolitan College, Birkenhead	13	1
J	Ysgol Gymraeg Bro Morgannwg, Barry (U)	STEM Club	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/**

Popular topics

Many discussions in ASK and the live chats were on topic, with students asking chemistry-related questions and more generally about the periodic table. They wanted to know what the most common and rare elements are, whether there are more elements yet to be discovered, and contextual questions such as how we can make chemistry more environmentally friendly.

They were interested in how the scientists used elements in their work, for example asking William about his work with Zirconium, which he wrote about on his profile, and all the scientists were asked for their favourite elements and what they find interesting about the periodic table.

A higher than average number of careers and education questions were asked, with students wanting to know about their day to day work, the experiments they do and about their university experience. Find out more on how IAS supports schools in meeting the Gatsby Good Careers Guidance Benchmarks.

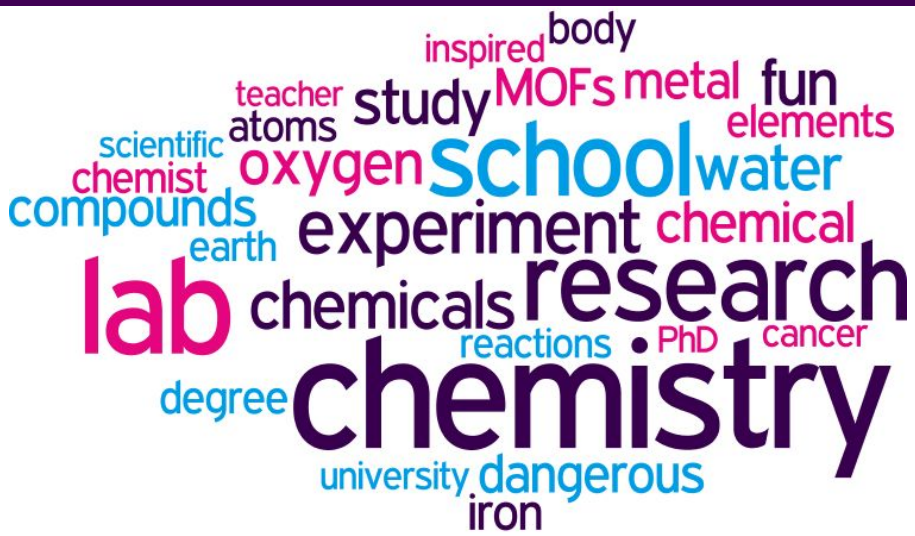
Elements Zone

William | Thibaut "Tibo" | Harry | Georgia | Emily | Aimee

I'm a Scientist Get me out of here

Frequent words used in live chats by students and scientists

Chat



Question analysis

Ask ?

Is formaldehyde dangerous?

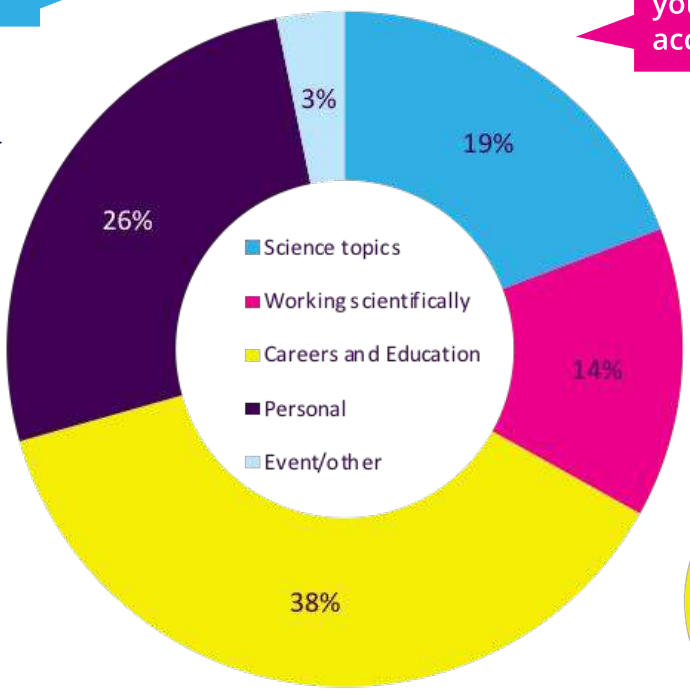
Are there any elements in electricity?

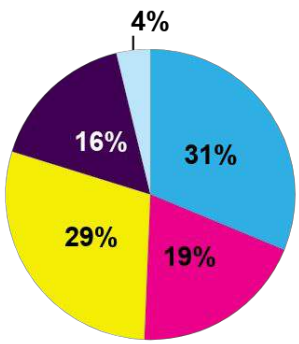
Are the science results you find on the internet accurate?

Can you choose an element to describe yourself? which ONE would it be and why?

Would you still do science if you knew that your lab was powered by a non-renewable electricity source?

If you could go back in time and stop an invention/ discovery, what would it be?





Historic Per-Zone Average (Themed Zon

Do you not like getting up a 7am or does it not bother you?

Does your dyslexia stop you from doing any work you have wanted to do?

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Examples of good engagement

The live chats were a great opportunity for students to connect with scientists on a personal level and build a rapport. Asking scientists about their daily life and sharing experiences helps students to see scientists as 'people like me', and to contribute to their Science Capital, such as in this example:

> *"Bonjour (Hello), Was it hard when moved away from your friends and family? How old were you when you moved to England? I'm doing french in school!!"* – ***Student***
>
> *"Bonjour! Thanks for your message! It was a bit difficult to move away from my family and friends but I often go back to France to see them and they come to visit me. I was 28 when I moved to the UK. And you? Have you been to France? You can write to me in French if you want!"* – ***Thibaut, Scientist***
>
> *"Bonjour!! I have never been to france but it sounds amazing! Did you enjoy france? What was the food like?"* ***Student***
>
> *"Yes, I loved living in France and I enjoy every time I go back. The food was delicious. I miss it often when living in the UK but I try to bring back something every time I visit family and friends in France."* - ***Thibaut, Scientist***

There were many occasions within the chats and in ASK where students asked thoughtful questions in reference to something they had read on the scientists' profiles. In this example, Aimee answers honestly when asked about her best qualities and how she feels she can contribute to a team:

> *"In your interview it says you wish to go into cancer research, if you do go into it in the future, what qualities do you think you will bring to their team of scientists?"* - ***Student***
>
> *"In the first instance I think I'll bring a huge amount of passion – Cancer research is what I have wanted to do since I was very young.*
>
> *I have done a little work in early stage cancer treatment research at university, so I do have a basis of knowledge, even although I am not working in that field at the moment, and I am very keen to keep learning!*
>
> *After the learning stage I think I am very good at taking what I've learned and coming up with outside of the box ways to apply it – that's a skill which is pivotal to my current job!*
>
> *I am also quite a good baker – so I'll bring cake to the team, if the rest of it isn't enough!"* – ***Aimee, Scientist***
>
> *"with all you knowledge and your passion for it i am sure you will go on and be a great member of the team someday !"* – ***Student***
>
> *"Thank you so much! Have your fingers crossed for me!"* - ***Aimee, Scientist***

Scientist winner: Harry Wilkinson

Harry's plans for the prize money: "*I'm planning to give it to the Outreach program in the Chemistry department, for the **CHeMneT program**. This is a program in which a class of secondary school pupils are invited to partake in practical experiments such as caffeine extraction or perfume making in the department's teaching labs, with support from students like myself. I hope the money donated will be able to fund a class from an underprivileged area, allowing these students to gain experience in a real lab setting, and to get a sense of what PG study in chemistry is like.*"

Read Harry's **thank you message**

Student winner: Phoebe

As the student winner, Phoebe 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*...

I've been a scientist for 8 years now. I had been thinking I might try and get a job doing something else but taking part in I'm A Scientist has really brought my love for science back!
— Emily, Elements Zone Scientist

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'm a Scientist has changed my perspective on science
— Student

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

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