March 2020

The Energy Zone was a themed zone, supported by the Royal Society of Chemistry. There were six scientists taking part in the zone:

- Struan Simpson is a PhD Student making materials that help quantum computers remember things.
- Isabel Cooley is a PhD Student who uses computer models to help design energy saving materials.
- Douglas Bray, the winner of the Energy Zone, is a PhD student using Water Hyacinth to make protein for animal food and gas so villagers can cook.
- David Threlfall is a Lifecycle Engineer at Rolls Royce, ensuring aeroplane engines work safely and reliably.
- Charlotte Hoskin is a PhD Student making a biological battery to act as an artificial retina.

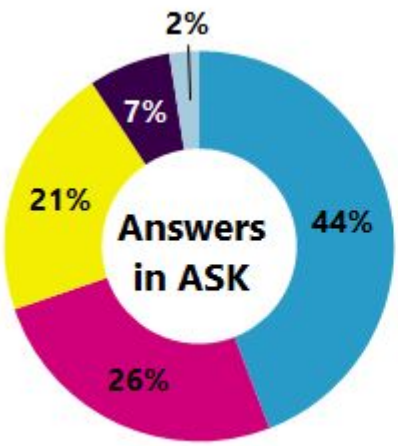
Key figures

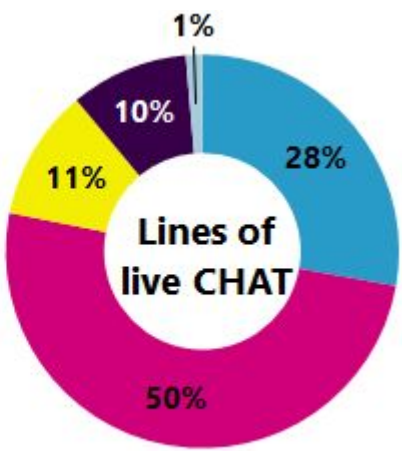
This zone had an above average number of students logging in, and active throughout the event, than other March 2020 zones. There were six scientists signed up, but one was unable to take part in the end due to personal reasons.

Due to the effects of coronavirus, many schools reported a large number of staff and student absences, which had an impact on their participation in the second week. Students could still access the chat from home so we still opened bookings, but there were a lower number of chats than we would normally see, and they were quieter on average.

	ENERGY ZONE	MAR '20 ZONES AVERAGE	2012–19 ZONES AVERAGE
Schools	6	7	10
Students logged in	379	300	385
% of students active in ASK, CHAT, VOTE, or comments	91%	86%	87%
Questions asked	385	251	637
Questions approved	265	154	284
Answers given	324	287	512
Comments	23	27	66
Votes	236	204	301
Live chats	18	14	16
Lines of live chat	6022	4869	5,722
Average lines per chat	335	358	357

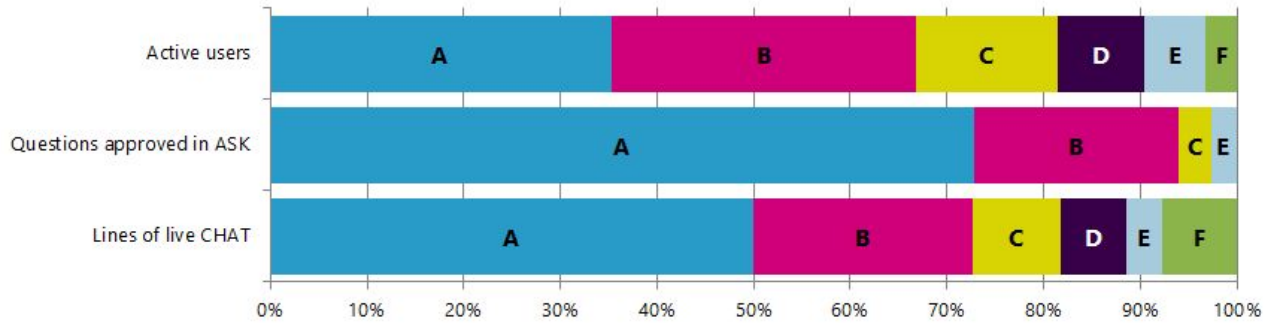
Scientist activity





	PLACE
Douglas Bray	1st
Struan Simpson	2nd
Isabel Cooley	3rd
David Threlfall	3rd
Lottie Hoskin	5th

School activity



		YEAR GROUP(S)	CLASS
A	The Richmond upon Thames School, Twickenham	7	4
B	Bedwas High School, Caerphilly (U)	9	5
C	Brockhill Park Performing Arts College, Hythe (U)	10	3
D	The Holmesdale School, Snodland (U)	9	3
E	Ridgewood High School, Stourbridge (U)	8	2
F	South Wilts Grammar School for Girls, Salisbury (U)	10	2

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/

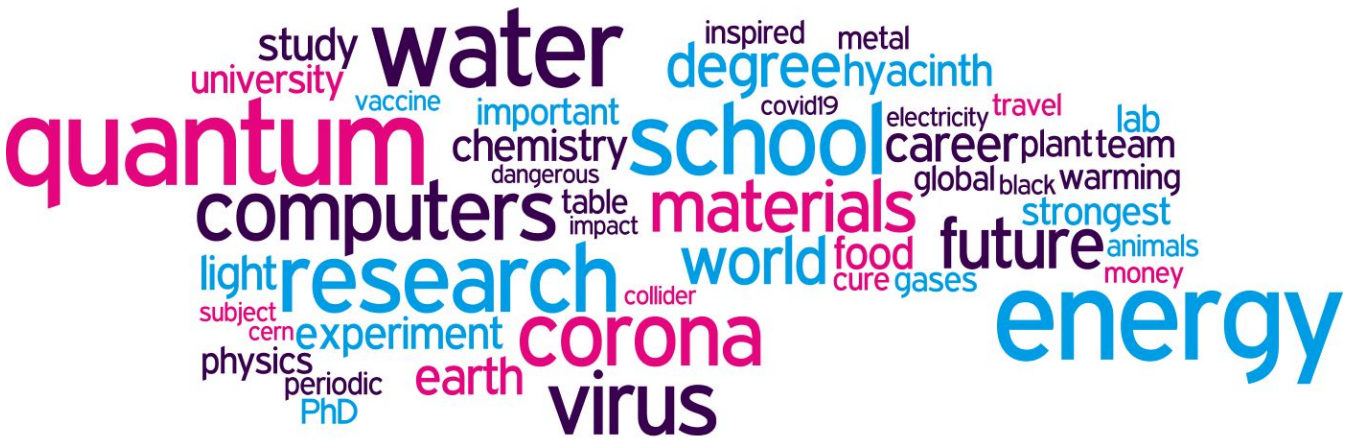
Popular topics

Students in this zone were interested in each of the scientists' research areas. They asked Struan a lot of questions about how how quantum computers work, and about the effects on society Isobel's work will have and whether she thinks we can stop global warming.

Students in this zone were very interested about sustainable energy sources, discussing the factors around using sources, including solar and hydropower. Students also asked scientists what energy sources would be used in the future.

Students got to know the scientists on a personal level, sharing experiences, hobbies, favourite foods and more. Students also asked Douglas specific questions about his experiences scuba diving, and asked Isabel questions about playing quidditch.

Frequent words used in live chats by students and scientists



Question themes and example questions in the Zone

What is the best place you've ever visited? And why?

How much energy is used on average per year by everyone?

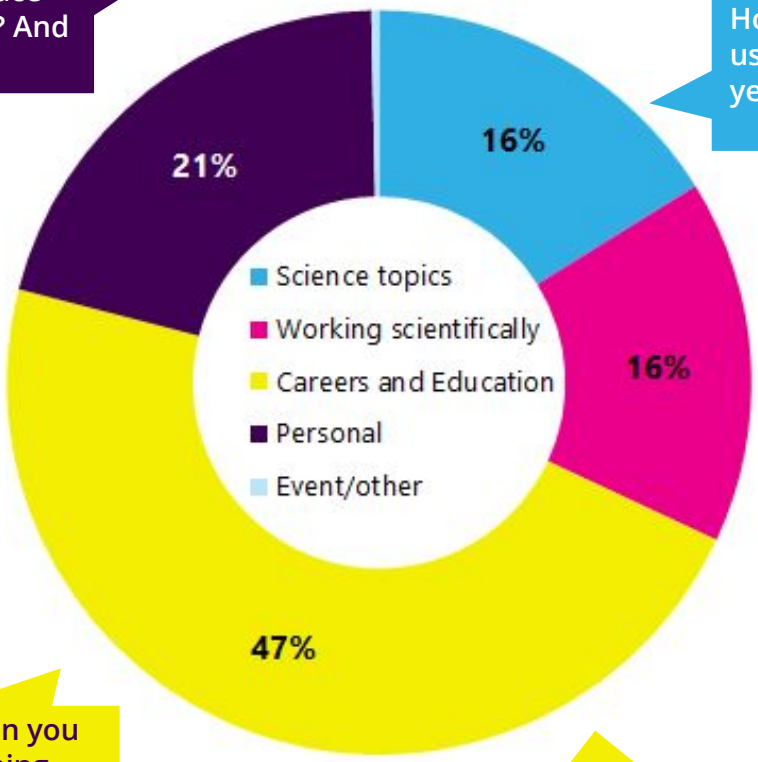
Do you speak any other languages?

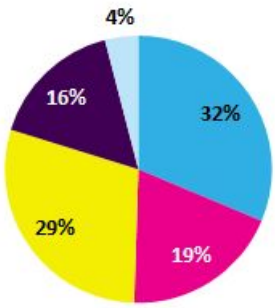
What is the most expensive piece of equipment you've used?

What do you find hard about your job? And why?

Is it rewarding when you accomplish something that could potentially make a difference in the world?

Have you ever thought of working independent and why?





Historic Per-Zone Averages

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Examples of good engagement

The students were asking lots of questions based around the scientists research. Students also asked about the favourite work of the scientists, allowing the scientists to share their experiences to show the scientists valued the students questions such as in this question in ASK:

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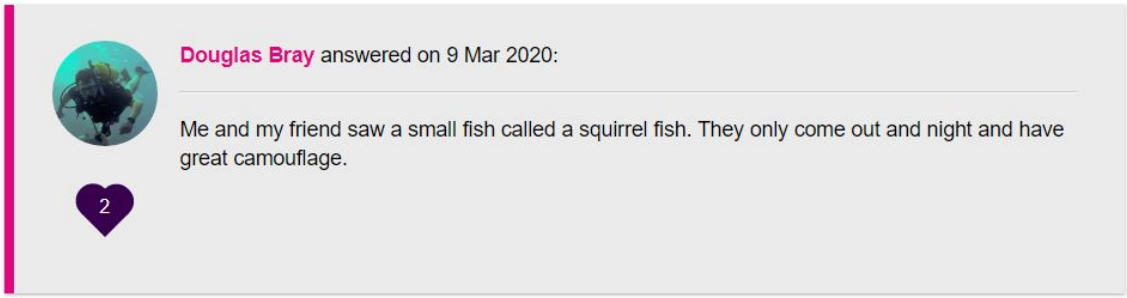

There were also questions from students wanting to get to know the scientists on a personal level. Finding things in common helps students to see scientists as normal people, and contributes to their science capital:

> *"Do you play video games? If so which ones?" -* ***Student***
>
> *"I used to play a lot of videos games but recently I don't have the time. I still like to try and play FIFA and Call of Duty with my friends." -* ***Douglas, Scientist***
>
> *"I also don't have that much time to play video games any more, but I still love to play them when I get the chance! Recently I've been playing The Outer Worlds, Spider-Man, and Subnautica." -* ***Struan, Scientist***
>
> *"I'm playing spider man as well!" -* ***Student***

Scientist winner: Douglas Bray

Douglas' plans for the prize money: *My friend in India works with a charity that helps young girls that live in the rural areas of India, the charity brings them together to teach them practical skills. I hope to work with the charity that will allow the girls to learn more about science. This could mean they could travel to the cities and get more education in the sciences."*

Read Douglas' **thank you message**

Student winner: grew390bug

As the student winner, grew390bug 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 March's *I'm a Scientist*...

All our students have thoroughly enjoyed the experience, learned a lot and had something positive to cling to this past week
— Teacher

I would highly recommend I'm A Scientists to my colleagues, as I had an incredible experience. The ability for high school students to ask questions (including some real tough ones) directly is a fantastic outreach tool, and I feel privileged to have taken part.
— Scientist

I think this is a pretty unique method of science engagement! You get the chance to get to know and help some of the students, particularly in the evening chats!
— Scientist

Thank you for answering every question no matter what the challenge!
— Student

This has been really useful. Thank you for taking time to answer us! :)
— Student

Thank you for giving up the time and answering our questions you have informed us with alot of cool and amazing information
— Student