

March 2020

The Food Zone was a themed zone supported by Wellcome. There were four scientists taking part:

- Ross Alexander, the winner of the zone, is a lecturer and researcher looking into what happens when plants get stressed.
- Martin Johnsson is a Postdoctoral Researcher studying the DNA of pigs and chickens to understand their biology and improve animal breeding.
- Gabriela da Silva Xavier is a Senior Lecturer in cellular metabolism researching type 2 diabetes.
- Ellie Spence is a PhD student working with a fungus that kills insects, to try and find an alternative to chemical insecticides.

Two other scientists were in the zone, but had to drop out at the last minute.

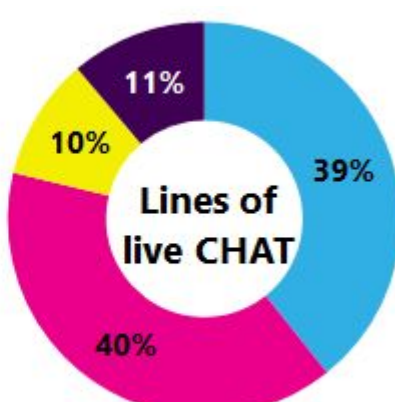
Key figures from the Food Zone

The Food Zone was quiet with fewer live chats than average, and these live chats were less busy than other zones in March 2020.

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.

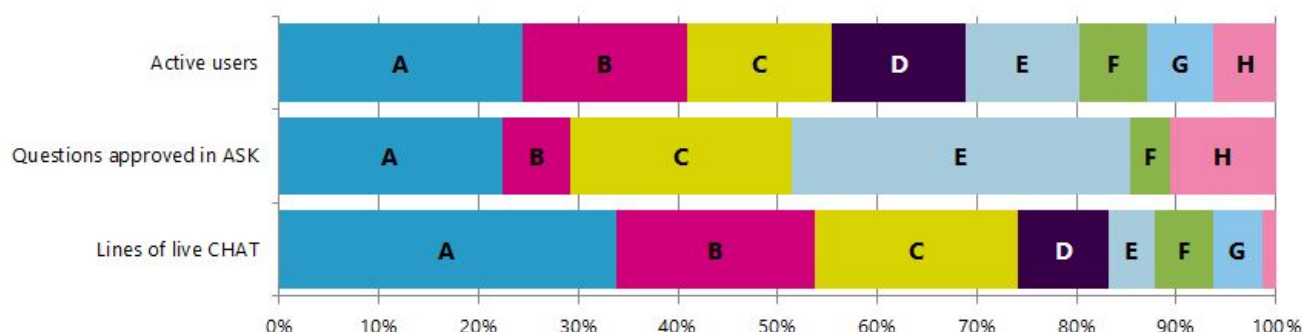
	FOOD ZONE	MAR '20 ZONES AVERAGE	2012-19 ZONES AVERAGE
Schools	8	7	10
Students logged in	210	300	385
% of students active in ASK, CHAT, VOTE, or comments	92%	86%	87%
Questions asked	160	251	637
Questions approved	103	154	284
Answers given	134	287	512
Comments	14	27	66
Votes	169	204	301
Live chats	12	14	16
Lines of live chat	3421	4869	5,722
Average lines per chat	285	358	357

Scientist activity



	PLACE
Ross Alexander	1st
Martin Johnsson	2nd
Eleanor Spence	3rd
Gabriela da Silva Xavier	4th

School activity



YEAR GROUP(S) CLASSES

A	The Holy Cross School, New Malden (U)	8,9	2
B	Hayesfield Girls School, Bath	9	1
C	John F Kennedy Catholic School, Hemel Hempstead (U)	7	1
D	The Holmesdale School, Snodland (U)	10	4
E	The Royal School Dungannon, Dungannon (U)	10	1
F	Consett Academy, Consett (WP)	7	1
G	Dagenham Park CE School, Dagenham (WP)	7	5
H	Upton Court Grammar School, Slough	11,12	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

There were lots of general discussions in the zone about food and different diets, such as the pros and cons of being vegetarian and vegan.

Students asked Ross a lot about his research into when plants get stressed, and Martin about his research into how to improve animal breeding. The students also asked many questions to Eleanor about her insect killing fungi, such as whether it would affect the plant, and whether that could affect other species that consume the plant.

Students got to know the scientists on a personal level, sharing experiences, and discussing their favourite foods.

Frequent words used in live chats by students and scientists

Chat



Question themes and example questions in the Zone

Ask?

What is your favourite animal?

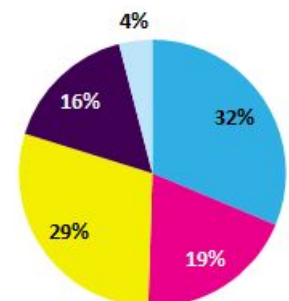
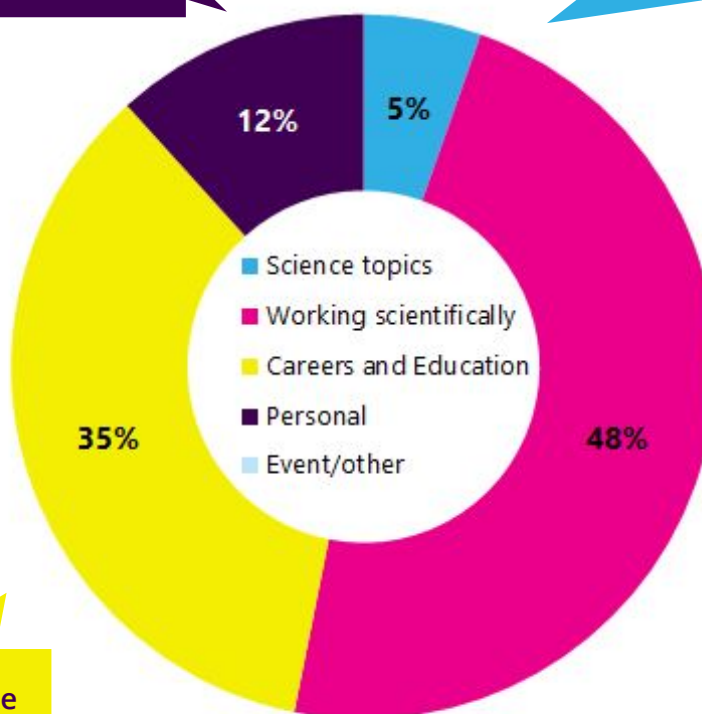
Why are poultry/ cock spermatozoa more unsuitable for cryopreservation compared to bull spermatozoa?

What are your published findings in the scientific journals?

Do you think foods made from insects (like burgers) should become more widely available?

How long did it take you to get where you are now?

How do you take dna samples?



Historic Per-Zone Averages

Examples of good engagement

The students were asking lots of questions around the scientists work and what the scientists did on a day-to-day basis. Scientists were good at explaining their work in simple terms:

*"what are the official names of what you work in?" - **Student***

*"Honestly, giving a good answer to exactly what scientific sub-field I work in becomes harder the further I get :) But I call myself a quantitative geneticist and genome scientist. And I work in "The Department of Animal Breeding and Genetics at my university." - **Martin, Scientist***

*"thank you! what is a quantitative scientist. it sounds cool" - **Student***

*"This means that I look at different animals, measure things about them (such as their colour, their growth rate etc) and then identify parts of DNA that affect colour, growth rate, and so on." - **Martin, Scientist***

*"thank you" - **Student***

There were discussions about the processes of science, and how the scientists performed their research, increasing the students knowledge and understanding:

*"what is the process of finding and picking out the fungus that kills insects. Do you find it underground or in the water or any other ecosystem?" - **Student***

*"Great question! These can be found in the ground and grown in the lab or you can find already infected insects in the wild. If you look on the bottom surface of a leaf you might be able to see dead insects covered in fungi." - **Ellie, Scientist***

*"could the chemicals sprayed on food for farming to stop insects affect us who eat it in the process, and how would natural funguses change that" - **Student***

*"The fungi kills insects that our on the crops pretty well! I have found that we can get 90% of insects with the fungus. But they do no work as reliably as a chemical because the fungus needs high humidity and warmth." - **Ellie, Scientist***

*"thank you. does this mean that we will still have to use the chemicals unless it is in the correct environment "- **Student***

*"Yes the chemicals are harmful to us and that is why there are strict rules for farmers to follow when they use them. Natural alternatives like fungi are not harmful to us or the environment :)" - **Ellie, Scientist***

*"what could chemicals do to effect us and where could it damage us" - **Student***

*"Chemical pesticides can be toxic if inhaled or eaten directly from the bottle. Fortunately, the farmer must not apply them to the food several days before they are harvested to allow the harmful chemicals to degrade." - **Ellie, Scientist***



Scientist winner: **Ross Alexander**

Ross's plans for the prize money: *"I would like to develop an activity around food security that I can take to different schools all over Scotland, particularly the far north where I am from. I would use the prize money for travelling to more remote areas of Scotland that might not have access to the same kind of science outreach, particularly my hometown in the north of Scotland. I was never exposed to anything like that at school, unless we spent hours on a bus travelling to the major cities in the south."*

Read Ross' [thank you message](#)

Student winner: **exit392car**

As the student winner, exit392car 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 a lot of cool and amazing information
— Student