

November 2020

The Health Zone ran from 2 to 27 November 2020. The Zone was one of 4 Zones that ran as part of *I'm a Scientist: On Demand* in November 2020.

I'm a Scientist: On Demand aims to offer greater flexibility to teachers in how, and when, they can take part in *I'm a Scientist*. This is in response to the COVID-19 situation and greater restrictions and uncertainty in schools.

The Health Zone was jointly funded by the Royal Society of Chemistry (RSC), and the British Society for Immunology (BSI). There were weekly evening chats for students to join from home, with two of these focussed on the topic of vaccinations.

Scientists

- 50 scientists created profiles in the Zone.
 - 10 reported being members of the RSC and 16 as members of the BSI.
- 48 scientists engaged with students through live Chats and/or Ask questions.
- Scientists were from a broad range of fields and career stages. For example:
 - Samantha Watson - radiation scientist at Public Health England
 - Bhagteswar Singh - Clinical research fellow at The University of Liverpool
 - Abbie Smith - trainee Medical Physicist working for the NHS

Students

- 486 students from 23 schools all over the UK logged into the Zone.
- 42% of active students were from target schools (WP and/or U).
 - 21% were from widening participation (WP) schools
 - 21% were from underserved (U) schools.

Chats & Questions

- 30 live Chats took place during the activity.
- 46 live Chats were booked (61% of capacity), but dropout was significantly higher than usual with 10 cancellations and 6 'school no shows'.
- On average, 8 scientists attended each live Chat session.
- 3 teachers typed questions in a live Chat on behalf of their students, so the number of students engaged will be higher.
- 50 student questions were approved. Scientists responded with 201 answers.

Key figures		Nov 2020 Average
Schools	23	20
Students logged in	486	488
% of students active	71%	83%
Scientists onboarded	50	42
% of scientists active	96%	88%
Questions asked	94	176
Questions approved	50	104
Answers given	201	263
Scientist comments	47	47
Student comments	1	5
Votes	232	262
Live chats	30	30
Lines of live chat	9323	9562
Average lines per chat	311	321

Impact of the COVID-19 pandemic

Uptake across all November 2020 Zones was much lower than initially expected.

The COVID-19 pandemic increased uncertainty and pressure in schools. Many teachers reported lost time due to school closures and students isolating, and a need to focus on the core curriculum.

Student attendance dropped to 65% for some schools in November. The rapidly changing situation made it difficult for teachers to plan ahead. Many schools restricted access to shared IT equipment, leading some teachers to ask questions in live Chats on behalf of their students, projecting the Chat on a screen. The average class size attending a chat was 25% below normal.

School activity

School	Active students	Chats attended/ booked	Live chat lines		
			Total	Per student	Questions approved
Prendergast School, London	66	3/3	810	12	10
St Bridget's Primary School, Glasgow (WP)	49	2/2	811	17	2
Haileybury Almaty, Kazakhstan	33	4/4	308	9	8
Robert May's School, Hook (U)	23	2/2	115	5	0
St Laurence's Primary School, Liverpool (WP)	21	1/2	245	12	0
Horbury Academy, Wakefield	21	1/1	229	11	0
John F Kennedy Catholic School, Hemel Hempstead (U)	20	1/1	203	10	1
Lycee Simone Veil, Valbonne, France	17	1/1	105	6	1
Upton St Leonards CE Primary School, Gloucester	16	1/1	260	16	0
Aith Junior High School, Shetland Islands (U)	16	1/1	118	7	0
Al-Ashraf Primary School, Gloucester	15	1/1	187	12	2
Swanbourne House School, Milton Keynes	13	1/1	234	18	5
Riverside College Halton, Widnes	11	1/1	46	4	15
The Norton Knatchbull School, Ashford (U)	6	1/1	68	11	0
Beaulieu Convent School, Jersey (U)	5	1/1	66	13	0
Hull College, Kingston-Upon-Hull	3	Only joined open chat	40	13	1
Northfield School and Sports College, Billingham	2	1/1	29	15	1
Sønderborg International School, Denmark	2	Only joined open chat	11	6	0
Frome Community College, Frome	2	0/1	0	0	4
Kenmont Primary School, London (WP)*	1	1/1	133	133	0
Sandymoor, Runcorn (WP/U)*	1	1/1	97	97	0
Gillotts School, Henley-On-Thames*	1	1/1	5	5	0

*These schools took part through the teacher account due to restricted access to individual student laptops.

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:

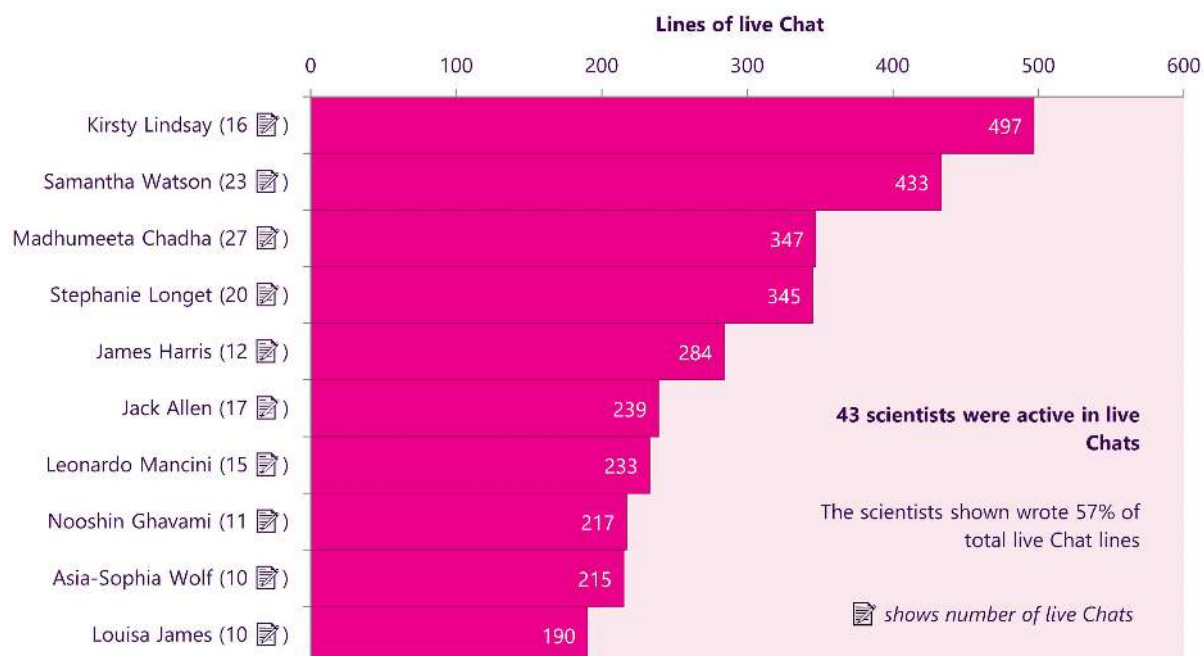
about.imascientist.org.uk/under-served-and-wp

Funded by

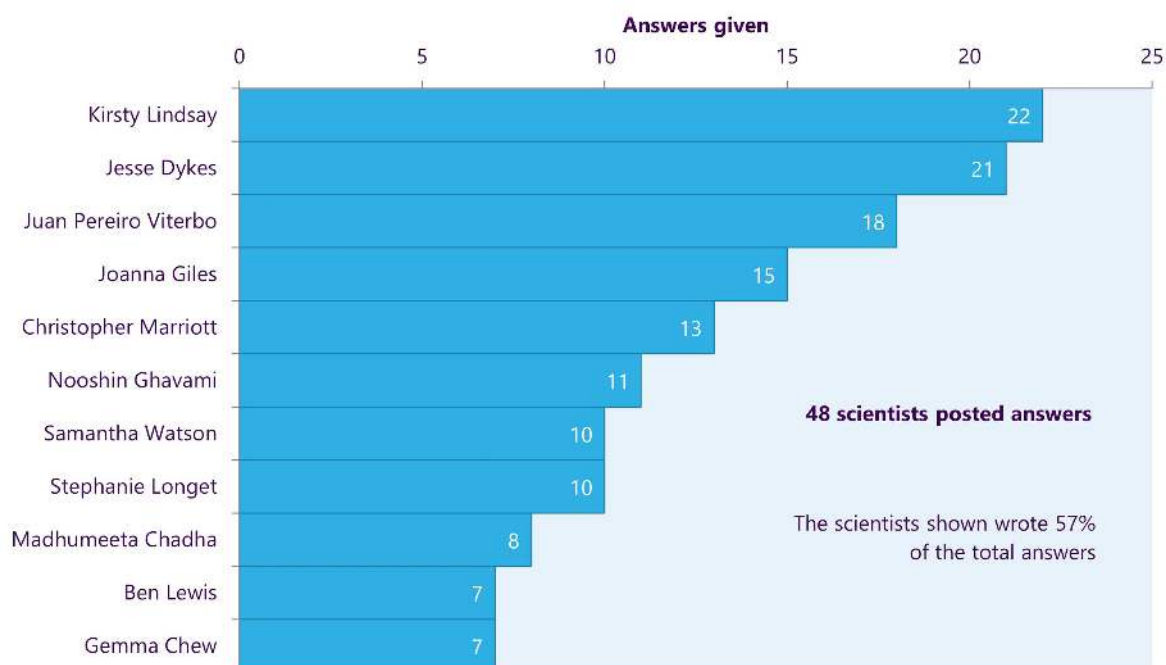
Scientist activity

48 scientists were active in the Zone, writing 5,202 lines of live Chat, and providing 201 answers to posted questions.

10 most active scientists in live Chats

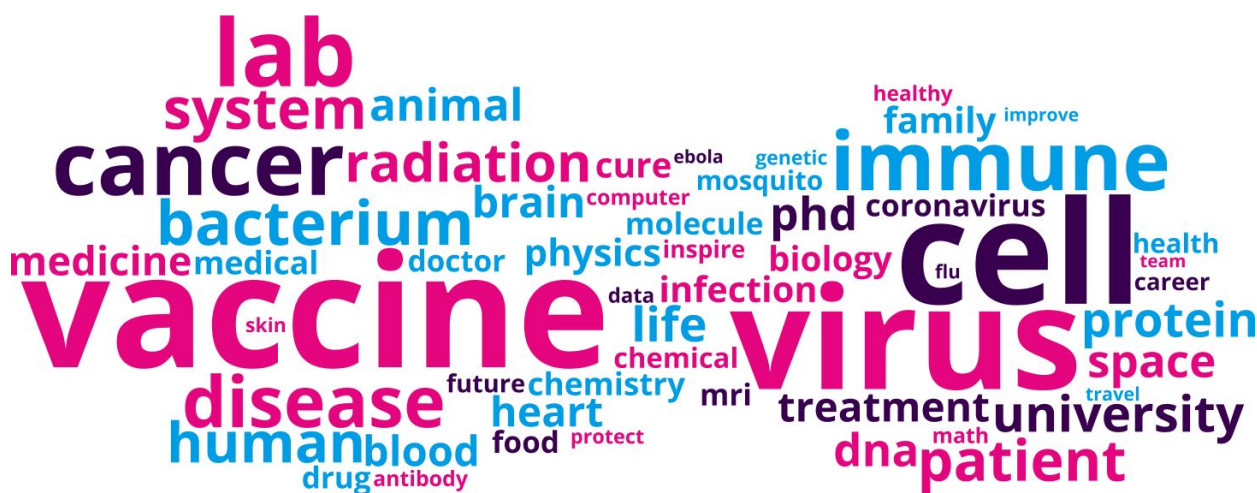


10 most active scientists in posting answers

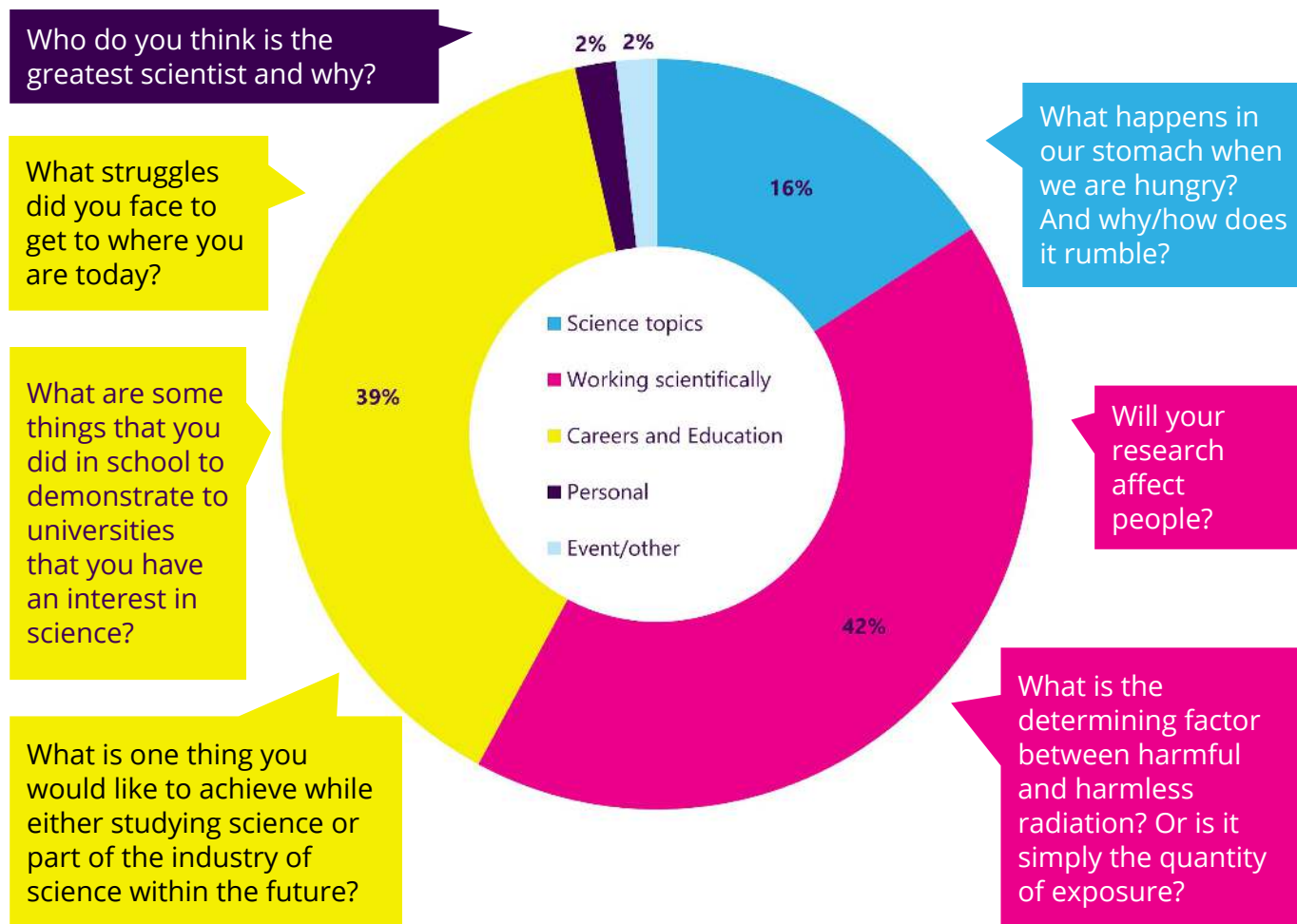


See all the participating scientists: health20.imascientist.org.uk/scientists

Frequent words used in live Chats by students and scientists



Question themes and examples



Examples of good engagement

Due to restrictions on students using IT equipment in some schools due to COVID-19, three teachers ran Chats through their own accounts, with students following on a big screen as a class. The example below is from one of those Chats.

In the below example, the class asked Louise about vaccines, who also recommended a virtual activity the class could look into to further their understanding of Edward Jenner:

patelz20 Hello Scientists! Can you let us know how vaccines work?

Louise @patelz20: Vaccines are one of the greatest inventions in human history and have saved so many lives! Edward Jenner is the father of vaccination as he essentially invented it. Basically, a vaccine is a small piece of the virus that makes you ill. A vaccine teaches your immune system to fight off the virus, so when you come across the real virus you're ready to defeat it!

patelz20 @Louise: Thanks Louise

patelz20 @Louise: Edward Jenner! We know him well at Al-Ashraf, because he was born and raised in Gloucestershire, which is where we are!

Louise @patelz20: Cool!! Have you ever been to Dr Jenner's House?

patelz20 @Louise: Not yet, but we would love to once Covid is over

Louise @patelz20: They have done an online event during COVID which you should still be able to see the content of!

patelz20 @Louise: Thanks for that. I will have a look.

Many Chats were focussed on the Zone theme, with students interested in the causes of illnesses, and the science behind them, such as in the below example about cystic fibrosis research:

been419due @Aishwarya hello, i would like to know how mucus is thick or not in the specific case of cystic fibrosis. Is it because of chloride ion ?

Aishwarya @been419due: Great question. I don't know if I am the best person. But as far as I know it is because of an abnormal gene called CTFR which leads to buildup of mucus which in turn disturbs the chloride ion regulation

been419due @Aishwarya: Thank you for your answer. So chloride ion is not what makes fluid mucus ?

Aishwarya @been419due: Indeed it is but the chloride amount gets disturbed due to CTFR. The increase in chloride disturbs the transfer of salt and water in the mucous leading to higher dehydration of mucus which makes it sticky

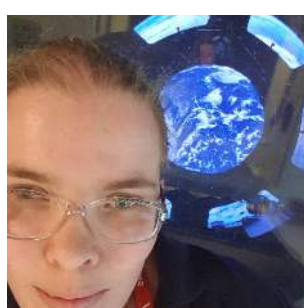
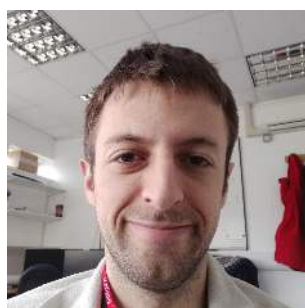
been419due @Aishwarya: Oh okay I understand. Thank you

Scientists of the Week

Students voted each week for their favourite scientist to be named *Scientist of the Week*. The 4 *Scientists of the Week* were:

Leonardo Mancini, Kirsty Lindsay, James Harris, and Aishwarya Mishra.

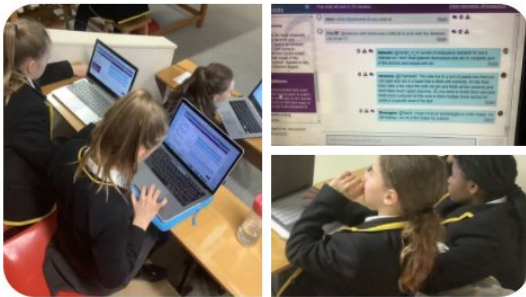
The overall winner of the Zone was **Kirsty Lindsay**.



Feedback



Oratory Science @oratorys... Nov 26
 @HouseWooten your 1st Form girls asked some cracking questions to #actuallivingscientists working in medical research in today's @imascientist chat. Definitely some future #WomenInSTEM in this group! 🧑🏻🔬 🚀 🧑🏻🔬 🧑🏻🔬



"It's been great listening to your works in medical science and answers."

Student

"I loved the times when we got bombarded with questions from science to aspirations to movies to favourite food and music. Meanwhile, learning so much from students and scientists alike."

Aishwarya Mishra, Scientist.

"Your interesting questions are always the best part: it reminds me to be curious and love my work just a little bit more."

**Kirsty Lindsay,
Health Zone Winner**

"They [students] have been really inspired."

Teacher

"It was really interesting to ask questions!"

Student



Dr Louise Topping @drlouto... Dec 3
 Taking part in @imascientist was really fun, and I can honestly say it's probably one of my favourite engagement activities I've been part of. Highly recommend to everyone, especially those who struggle to fit engagement activities into their busy schedules (IAS is v flexible)!