March 2023

The Health Zone (health23.imascientist.org.uk/) ran from 6 to 31 March 2023 and was funded by the UK Research and Innovation Fund, STEM.org and the EPSRC Centre for Doctoral Training: Smart Medical Imaging Institute.

Key activity figures

	Health Zone	March 2023 Mean
Students logged in	1,033	815
Students active	90%	90%
Schools	37	33
Scientists allocated	51	42
Scientists active	41 (80%)	28
Chats booked	103	75
Chats took place	60	48
Lines of Chat	17,989	12,417
Average lines per Chat	300	256
Follow up questions asked	263	201
Follow up questions approved	148	151
Answers given to follow up questions	521	451
Scientist comments	61	41
Student comments	8	5
Votes	519	453

Who took part?

The Zone featured 41 scientists working within industry and academia - careers including clinical researcher, biomedical lab assistant, virus geneticist, consultant neonatologist and bioengineers. They connected with 1,033 students from across the UK. 930 students (90%) actively participated in Chats and asked follow up questions.

519 votes were cast by students. The winning scientist with the most student votes was **Benjamin Foster**, who synthesises proteins to study how they behave under different conditions.

Activity

103 Chats were booked. 60 took place.

Out of the remaining 43 Chats booked, 26 were cancelled and in 18 cases, the school did not attend and did not give notice. National teacher strikes and adverse weather contributed to the high number of cancelled and non-attended chats. All schools were contacted and invited to rebook.

There were 6 Chats where the teacher asked questions on behalf of their students. It is also common for students to share login details or computers during Chats. Therefore, the number of students engaged is expected to be higher.

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School activity

Students from 37 schools across the UK actively participated in the Zone.

School	Students logged in	Active users	Chats attended	Chat lines (total)	Chat lines (per user)	Follow up questions approved	Votes
Whitehall Junior Community School, Middlesex (WP)	161	161	6	1,748	11	25	35
Clevedon School, Somerset	57	56	2	789	14	11	53
Denbigh Primary School, Bedfordshire (WP/U)	56	52	3	547	11	24	33
Sir Herbert Leon Academy, Buckinghamshire (WP)	52	49	2	361	7	1	33
The Priory School, Shropshire (U)	49	48	2	484	10	3	25
Fulwood Academy, Lancashire (WP)	39	38	2	338	9	4	24
St Bridget's Primary School, Glasgow City (WP)	40	37	4	1,217	33	0	32
The Excel Academy, Staffordshire (WP)	46	36	2	432	12	9	33
Feversham Academy, West Yorkshire (WP)	38	36	2	216	6	0	35
Mulberry School for Girls, London (WP)	33	33	2	291	9	21	33
Hounsdown School, Hampshire	31	31	1	293	9	14	32
Sir Harry Smith Community College, Cambridgeshire (U)	31	31	2	182	6	3	27
Furness Academy, Cumbria (WP/U)	37	30	2	357	12	0	1
Temple Meadow Primary, West Midlands (WP)	31	29	1	233	8	0	0
Clifton Primary School, Manchester (WP)	28	27	1	355	13	0	18
Pinner High School, Middlesex	39	24	2	245	10	2	13
Trinity Primary Academy, London (WP)	26	23	2	143	6	6	4
Prendergast Vale School, London (WP)	29	22	1	415	19	9	3
Exeter College, Devon	25	22	2	98	4	0	9

School	Students logged in	Active users	Chats attended	Chat lines (total)	Chat lines (per user)	Follow up questions approved	Votes
Litcham School, Norfolk (U)	21	21	1	191	9	0	9
Dartford Science & Technology College, Kent	20	20	1	145	7	0	0
Darrick Wood School, Kent (U)	17	16	1	33	2	0	16
Maiden Erlegh School in Reading, Berkshire (WP)	13	13	1	144	11	0	8
Acorn Park School, Norfolk (WP)	13	13	3	142	11	0	12
The City of Leicester College, Leicestershire (WP)	14	12	1	137	11	0	0
Cox Green School, Berkshire	18	11	2	86	8	3	4
St Dominic's Grammar School, Belfast (WP)	11	11	1	84	8	0	11
Ingoldmells Academy, Lincolnshire (WP)	9	9	1	85	9	0	9
Albright Education Centre, West Midlands (WP)	6	6	1	77	13	0	2
South and City College Birmingham, West Midlands	9	6	2	51	9	2	3
Europa School UK, Oxfordshire	2	2	1	46	23	0	2
Hillhead High School, Glasgow City (WP)	2	2	1	21	11	0	0
Biggar High School, South Lanarkshire (U)	16	2	0	0	0	11	0
Winstanley College, Lancashire (U)	2	1	1	21	21	0	0
Sir William Romney's School, Gloucestershire (U)*	0	0	1	56	56	0	0
Gravel Hill Primary School, Kent (WP)*	0	0	1	37	37	0	0
Chewton Mendip Primary School, Somerset*	0	0	1	32	32	0	0

** In these chats teachers typed questions on behalf of their students, with the chat displayed on a screen.*

We want to increase the participation of under-represented groups. Find out what we mean by under-served (U) and widening participation (WP) schools, and how you can support us in working with more of these: **about.imascientist.org.uk/under-served-and-wp**

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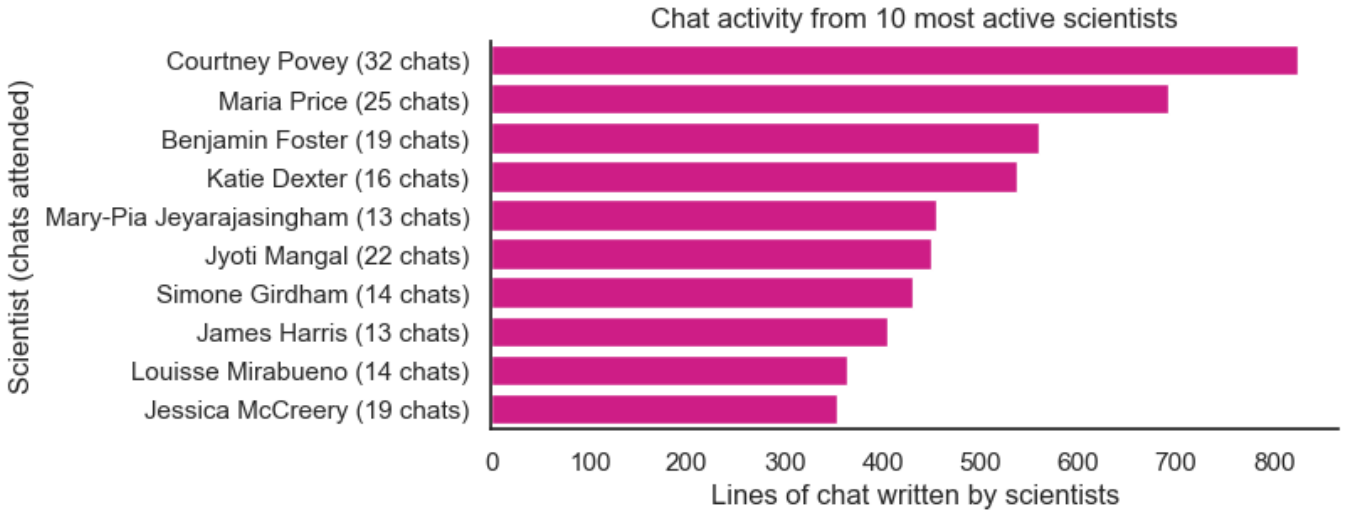
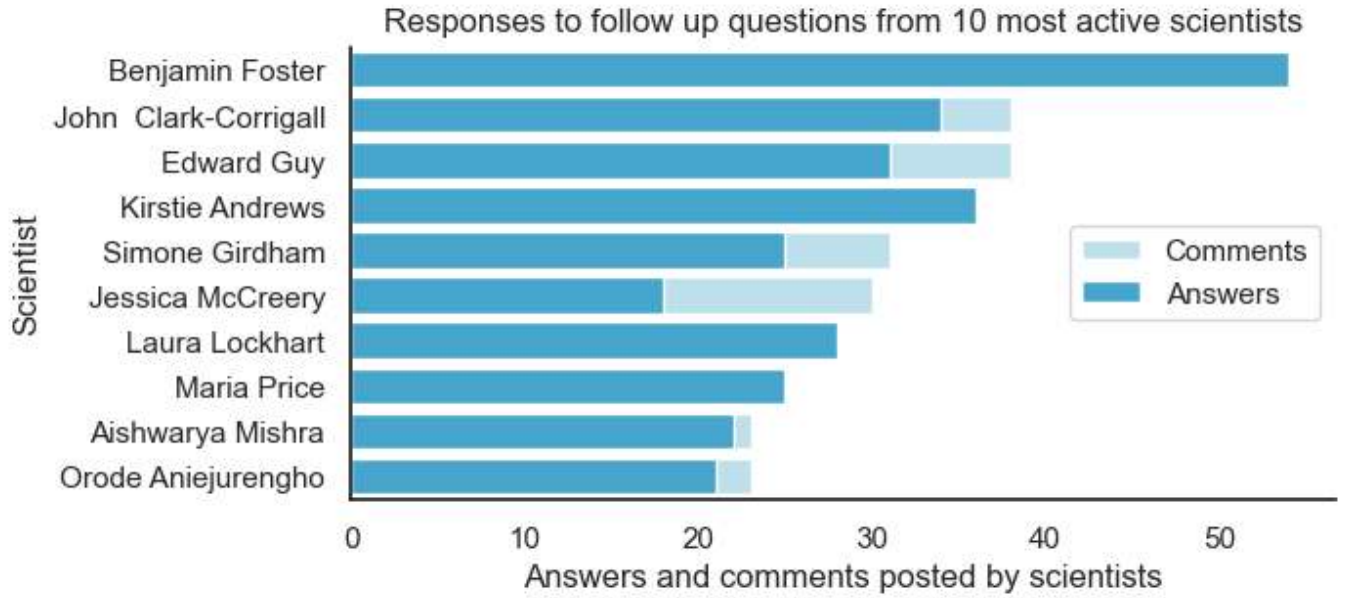
Scientist activity



The scientists shown wrote 66% of the lines of chat in the zone.
The average scientist attended 8 chats, and wrote 188 lines.



The scientists shown posted 56% of the answers, and 52% of the comments in the zone.
The average scientist posted 13 answers, and 1 comments.

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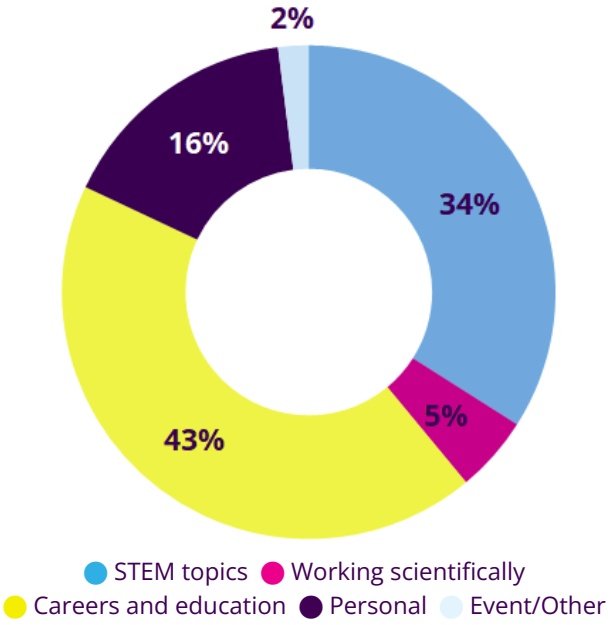
Chats

The word cloud below demonstrates what students and scientists talked about in Chats. The bigger the word, the more frequently it was used.

Follow up questions

The chart below shows an analysis of questions students sent to the scientists. Questions are coded into overarching categories. The examples are coloured by category.



Can brains get bigger over time?

Do you think earth is the only planet with life on it?

How did people start working with the brain if they didn't know anything about it?

How do you make these computer simulations?

What was the most interesting discovery that you found?

If you keep failing in science will you ever succeed?

What do u think the hardest milestone of your work will be?

What kind of instruments do you play?

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Examples of good engagement

Discussions around how scientists work and their research show students the range of possibilities for working in science.

Student 1: What are some current projects ongoing for you?

Jessica (scientist): At the minute I am working on a project called 'Dynamic Dudes.' Dynamic Dudes is a project that looks to improve primary school children's relationship with fruit and vegetables as well as trying to get them to be more active!

Student 1: When doing so, how do you insure this is a sustainable safe approach?

Jessica (scientist): We've done a lot of research into the topic and a lot of trial interventions to get where we are today. The project is based on rewards, so we reward children for displaying positive attitudes and trying and tasting new fruit and veg

Conversations around scientists' lives and hobbies help to build rapport between students and scientists; encouraging students to see scientists as "normal people".

Student 3: What do you do in your free time?

Maria (scientist): Sleep! Other than that, mainly the gym and watching TV

Katie (scientist): I like to crochet - i make my own clothes and toys. I also like to go running and cycling. And watch sports in the pub! :)

Hannah (scientist): In my free time I watch TV, potter about at home or do things with my church.

Student 2: Does your lung disease affect your job in any way?

Kat (scientist): Yes and no! We have to have checks every year to make sure the animals we work with aren't making us sick. Sometimes you can become allergic to them if you work with them for a long time. I always have to spend a little longer in these tests to explain that my lungs don't work as well as other people's. But it's not because of the animals!

Specific questions about scientists' work and research generate interest in the subject area, develop knowledge, and help students to understand how scientists work.

Student 4: How do you build a body part?

Kirstie (scientist): I make materials structures using engineering techniques- so imagine something on a really small scale but that looks like scaffolding on a building. The cells use this material to grow over, and I can change the material and the form it is in to make them behave differently.

Student 4: Why would they have to behave differently?

Kirstie (scientist): Good question. Different organs in the body are made up of different cells that have to behave in different ways to produce the function needed. So for example skin cells need to stretch more than bone cells.

Student 5: How long did these kind of discovery's take?

Kirstie (scientist): I've been working on nerve cells for about 10 years, I worked on a cancer test for 5 years. Some breakthroughs are quicker than others.

Scientists of the week

Students voted each week for their favourite scientist to be named scientist of the week.

The scientists of the week were:

James Harris, researches how viruses duplicate themselves in low-oxygen environments at the University of Oxford

Courtney Povey, researching reproductive health through clinical tests that help people have healthy babies

Louisse Mirabueno, outreach officer for Ensembl - a science website like Google but for your genome

Winning scientist

The overall winner, with the most votes at the end of the Zone was Benjamin Foster, synthesises proteins to study how they behave under different conditions

As Zone winner, they receive £500 to spend on further public engagement projects.

"One of the key aspects of the I'm a Scientist online Chats was the opportunity for students to ask questions to a panel of scientists from a variety of backgrounds, which I think is key for any public engagement – to get a breadth of experiences, as no one size or topic fits all. I'm thankful for the opportunity to share my research and experiences with those involved, and very thankful to have some funding to develop my public engagement research activities to those further afield to reach those who may not have such opportunities to hand."

You can read their full statement at here

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Feedback

"thank you so much for all of your time, we have managed to ask so many questions and have had such great replies, thank you all!"

Teacher

"Thank you all for answering our questions, I wish you all the best! Your work is amazing!"

Student

"I have learnt so much science about you. It was a great experience. Thank you"

Student

"Great experience, thoroughly enjoyed it. Another drum I'll be beating around the lab"

John (scientist)

"Thank you for all the amazing answers!"

Teacher

"Thank you all very much for your time- we are all buzzing"

Teacher

"Thank you all! Really good insightful questions :)"

Benjamin (scientist)

Funding partners

The Zone was funded by:

UK Research and Innovation

EPSRC Centre for Doctoral Training
Smart Medical Imaging

STEM AMBASSADORS 20 YEARS

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