

Pandemic Prevention Zone

January/February 2022

The Pandemic Prevention Zone (<https://pandemic21.imascientist.org.uk/>) ran from 5 January to 11 February and was produced on behalf of **the Royal Institution** to complement their **CHRISTMAS LECTURES** series. Funded by **UKRI** and the **Reckitt Global Health Institute**.

The Zone featured pandemic experts and contributors to the CHRISTMAS LECTURES, Going viral: How Covid changed science forever.

Key activity figures

	Zone
Schools	40
Students logged in	1,112
Students active	89%
Experts	53
Questions asked	384
Questions approved	313
Answers given	656
Expert comments	71
Student comments	8
Live chats	66
Lines of live chat	22,877
Average lines per live chat	347

Experts

50 experts created a profile in the Zone.

You can see who took part at

<https://pandemic21.imascientist.org.uk/experts/>

Students

1,112 students from 40 schools across the UK logged into the Zone.

75% of active students were from priority schools: 34% from underserved schools and 48% from widening participation schools.

Live chats

66 live chats took place during the activity: 65 were school classes booked by teachers and one was an additional chat, open to all the students.

An additional 26 live chats were booked: 17 were cancelled and in 9 the school was unable to attend without cancelling.

There was one live chat where teachers asked questions on behalf of their students. It is also common for students to share login details or computers during live chats. Therefore, the number of students reached will be higher.

On average, 5 experts attended each live chat.

School activity

Students from 40 schools across the UK participated in the Zone. In addition to live chats booked by teachers, there were 5 Thursday evening chats scheduled for the students and their families.

School	Active users	Chats attended	Chat lines (total)	Chat lines (per user)	Questions approved
Reading Girls' School, Reading (WP)	159	7	2,576	16	43
The Arnewood School Academy, New Milton, Bournemouth (U)	70	4	756	11	27
St Bridget's Primary School & Nursery Class, Glasgow City (WP)	61	3	1,073	18	1
Robert May's School, Hook (WP)	61	4	565	9	7
All Saints Catholic College Specialist in Humanities, Huddersfield (WP)	53	3	637	12	28
Harris Girls' Academy East Dulwich, London (WP)	52	3	797	15	30
Beaulieu Convent School, Jersey (U)	34	2	373	11	0
Bristol Cathedral Choir School, Bristol	32	1	376	12	2
Stirling High School, Stirling	32	2	297	9	18
Derby College, Derby (U)	32	1	338	11	17
Darrick Wood Junior School, Orpington	30	1	443	15	5
St Dominic's High School, Belfast (WP)	29	2	340	12	5
John F Kennedy Catholic School, Hemel Hempstead (U)	28	1	277	10	0
Hilbre High School, Wirral (U)	27	2	394	15	2
The Emmbrook School, Wokingham	26	1	293	11	58
Furness Academy, Barrow-in-Furness (WP/U)	26	1	338	13	3
Cox Green School, Maidenhead	20	1	205	10	10
Dagenham Park CofE School, Dagenham (WP)	18	2	106	6	3
St Gilgen International School, St Gilgen, Austria	17	1	66	4	22
Hadlow Primary School, Kent (WP/U)	17	1	169	10	4
Queen Elizabeth's Girls' School, Barnet (WP)	16	1	99	6	0
MidKent College, Gillingham (U)	15	1	146	10	2

The West Bridgford School, Nottingham	15	1	298	20	8
Garth Hill College, Bracknell	14	1	134	10	2
Prendergast Vale School, London (WP)	14	1	184	13	3
Immanuel and St Andrew Church of England Primary School, London	13	2	271	21	0
St Thomas More Catholic Primary, Birmingham (WP/U)	13	2	273	21	0
St Julian's School, Newport	12	2	120	10	2
Chard School, Chard	12	1	166	14	6
St Margaret Ward Catholic Academy, Stoke-on-Trent	11	1	180	16	0
Colton Hills Community School, Wolverhampton (WP/U)	10	1	78	8	0
Wigan and Leigh College, Wigan	10	2	70	7	4
Kirkbie Kendal School, Kendal	9	1	152	17	0
Hull Collegiate School, Hull	8	2	118	15	0
Strode College, Street (U)	7	1	35	5	1
Hillside High School, Bootle (WP)	7	1	42	6	0
The Heathland School, Hounslow (WP)	7	1	38	5	0
Cardinal winning secondary, Glasgow (WP)	6	1	87	15	0
Brentwood Ursuline Convent High School, Brentwood (U)	5	1	31	6	0
Portree Primary, Highland* (U)	1	2	43	43	0

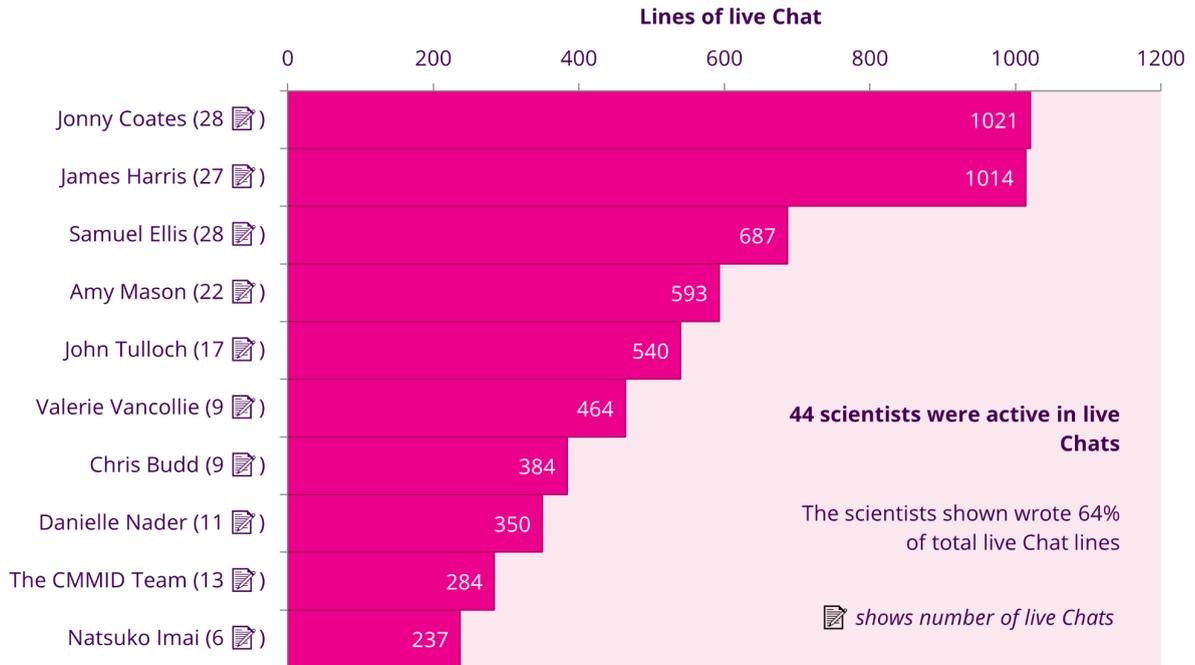
** In these chats teachers typed questions on behalf of their students, with the chat displayed on a screen.*

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

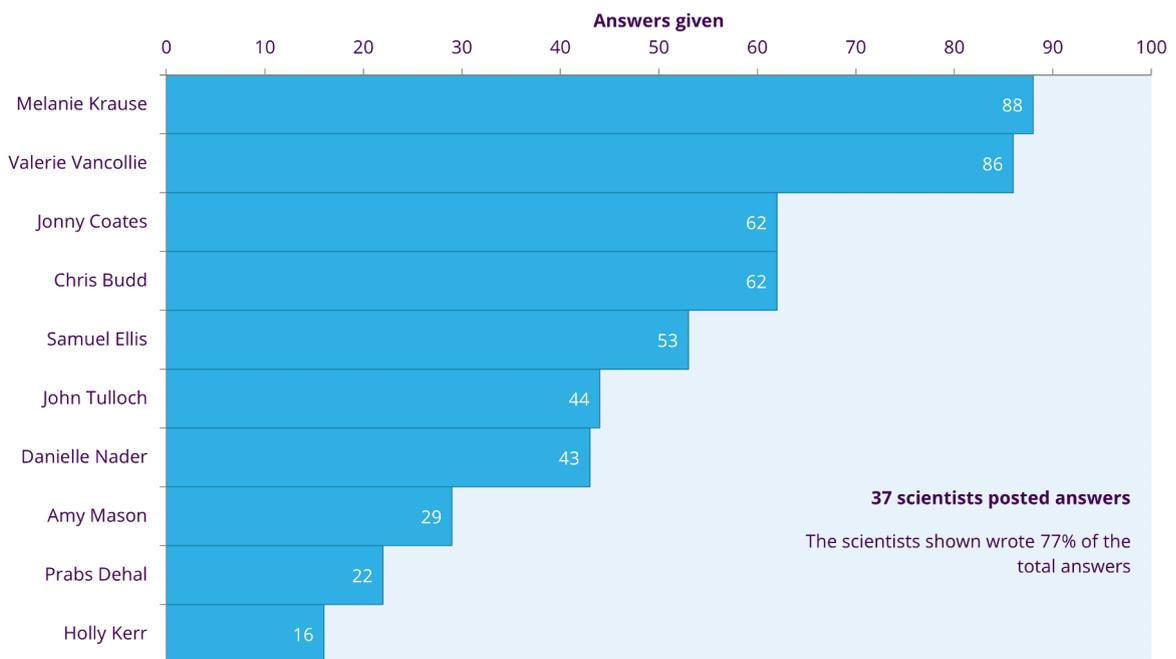
Expert activity

During the Zone the experts interacted with students by writing 8,720 lines of live chat, and providing 656 answers to 313 posted questions. On average, experts attended 6 live chat sessions.

10 most active scientists in live Chats

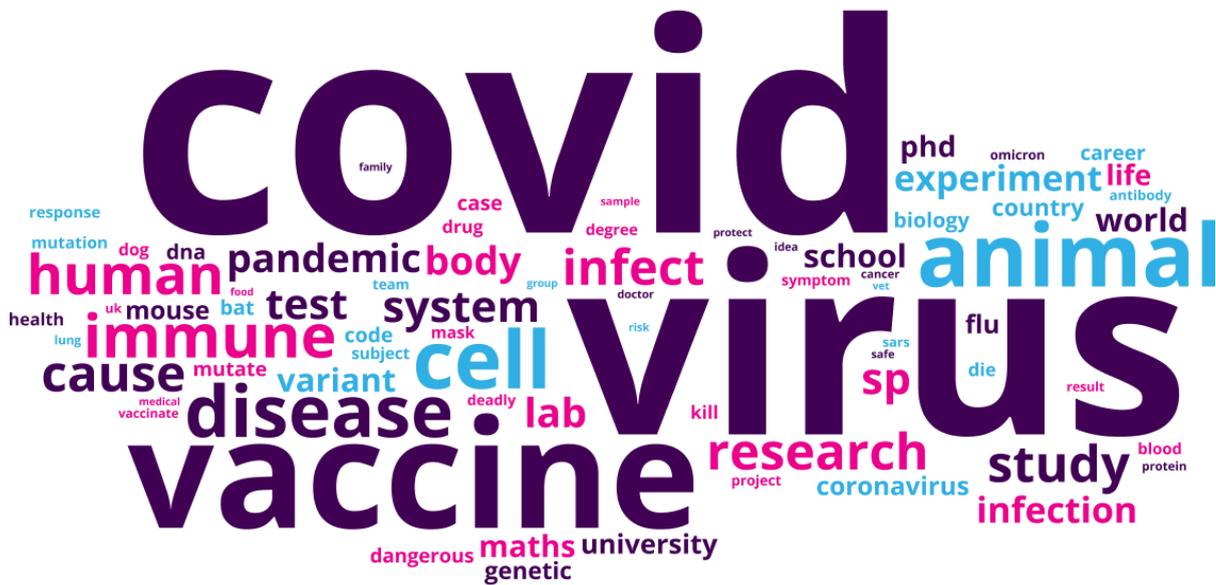


10 most active scientists in posting answers



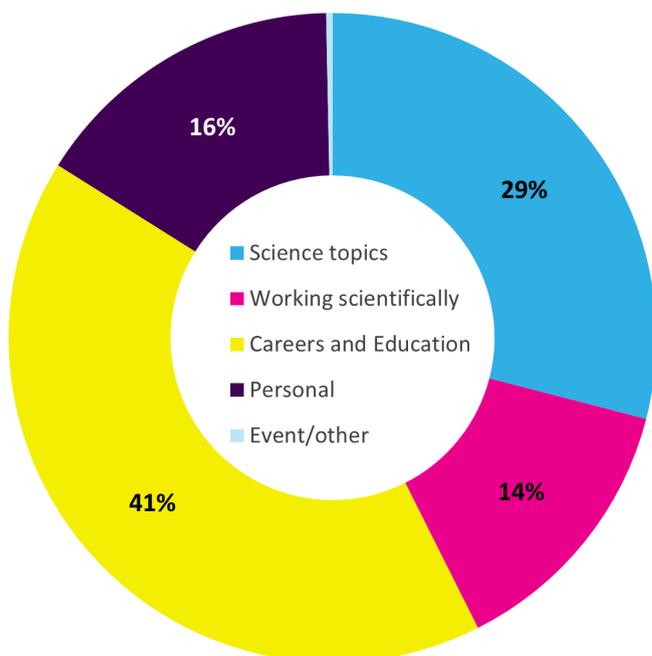
Live chats

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



Questions in Ask section

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



- How many estimated viruses are in the whole universe?
- What effect does Covid have on the brain?
- Did you change any of your family's habits as a result of anything you learned from this study?
- Do you think an Iron man suit could be created? If so, how far in the future would it be and how long would it take?
- What was your favourite way of learning new information whilst studying?
- What's your advice for anyone who wants to become a microbiologist?
- What does your usual workday consist of?
- What is your go to ice-cream flavour?

Good engagement

Being able to see how science is relevant to everyday life and how certain knowledge or science can be utilised is an important part of Science Capital.

Student 1: Why did the covid vaccine make me ill?

Samuel (expert): So vaccines train your immune system to recognise a target, in this case part of covid. It needs to activate the immune system to do this, but sometimes it overreacts a little and causes some side effect symptoms

Student 1: Thank you

Subject specific questions can help generate interest and knowledge about the scientific field.

Student 1: Now that we have mRNA vaccines that are being used on the general public, do you think this type of vaccine will be used to make future vaccines for other types of viruses?

James (expert): Absolutely! Hepatitis C virus is mRNA based. Its entire genome is RNA, and has been so hard to design a vaccine for. I suspect that the new mRNA vaccine tech will really improve the chances of a HCV vaccine

Jonny (expert): Absolutely. Particularly now that it has been proven. As far as I'm aware this is already underway for different diseases.

Victoria (expert): Great question. To answer in short, yes! It's a very exciting prospect

Connecting with scientists over shared interest and learning that they are "regular people" can help students relate to them. This makes it easier for students to see themselves in science-related careers.

Student 1: Would you prefer working indoors or outdoors in the world?

James (expert): I love spending time outdoors

Jenny (expert): Outdoors in the summer and indoors in the winter, is that an option? :)

Student 2: of course! I would totally agree too

Lucy (expert): Haha same as Jenny!

Information on the scientists careers can provide insight into how variable careers can be and what students may need to do to get there.

Student 1: What is the hardest thing about your job?

John (expert): Great question! I find the hardest thing is asking funders for money to fund all the existing research that we do. It's normally a less than 20% success rate, so you can often be disappointed!

Student 2: So how do you become successful in asking?

John (expert): There is an element of luck to it. They are decided by panels so you have to try and include elements that the panel will find interesting and exciting. At the moment it is hard to get much funded unless it has something to do with COVID

Sophie (scientist): For me, the hardest thing is managing lots of different projects at the same time! At the moment I'm forecasting COVID-19 hospital admissions, and about to start a new project making forecasts of measles in Niger!

Amy (scientist): I hate the writing up - love doing the coding and the maths and drawing the graphs and tables. But turning it into a paper and writing out all the paragraphs = yuck

Student 1: What kind of grades did you guys get for your GCSEs or A levels?

Jennifer (scientist): I actually didn't study science at A level. I did sociology, history and english literature but I entered the workplace and worked my way up internally in the company. GCSE science, english and maths are important.

There is always a route into science.

Feedback

The students really enjoyed the session and were asking us lots of questions behind the scenes too. We really appreciate the time and energy the facilitators and scientists put into making this event happen. It was really lovely for us to see all the students so engaged and excited about careers in scientific fields - so a very big thank you!

Teacher

Thank you so much. I'm really looking forward to see if I will be able to chat more on here.

Student

You are an inspiration to me.

Student



Jonny Coates

@JACoates

Really enjoyed all the chats on [@imascientist](#) the past two weeks! There have been some brilliant questions. I'm excited to answer more next week 😊

5:44pm · 14 Jan 2022 · Twitter Web App

We are buzzing here, thank you so much, we've really enjoyed ourselves!

Teacher



Garth Hill College Science

@GHC_Science

KS3 Science Club have been having a great time this afternoon chatting with Mercedes, Jonny and Toby in the Pandemic Zone at [@imascientist](#) We can't recommend enough booking a web chat! [#teamscience](#) [#chatbiology](#) [#asechat](#)



Victoria Cox

@ToriCoxSTEM

Just did my first chat session for [@imascientist](#), some amazing questions from the year 7s e.g. what's the hardest part about being a scientist, how are vaccines made and how do you tell the difference between COVID19 variants? A pleasure talking to such engaged students!

1:54pm · 6 Jan 2022 · Twitter Web App