

# November 2022

The Genetics Zone ([genetics22.imascientist.org.uk](https://genetics22.imascientist.org.uk)) ran from 7 November to 2 December 2022 and was funded by the Institute of Genetics and Cancer, Wellcome Connecting Science and Wellcome Centre for Human Genetics.

The Zone featured **30 scientists** working across a variety of fields. They connected with **684 students** from across the UK. **515 students (75%) actively participated** by writing Chat lines and asking follow-up questions.

## Key activity figures

	Zone
Students logged in	684
Students active	75%
Schools	32
Scientists	30
Live Chats booked	56
Live Chats occurred	41
Lines of live Chat	10,034
Average lines per live Chat	245
Questions asked	107
Questions approved	65
Answers given	164
Votes	205

## Who took part?

Students from 32 schools across the UK logged into the Zone.

69% of active students were from priority schools: 38% from underserved schools and 41% from widening participation schools. Students can be from a school that is both widening participation and underserved.

A total of 205 votes were cast by students. The winning scientist with the most student votes was **Charli Corcoran**, Zebrafish Facility Technician for the Institute of Genetics & Cancer.

## Activity

56 live Chats were booked. 41 took place.

Out of the remaining 15 Chats booked, 7 were cancelled and in 8 the school did not attend and did not give notice. All schools were chased and invited to rebook.

There was one live Chat where the teacher 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 engaged will be higher.

Students asked 107 follow-up questions of which 65 were approved and 29 were duplicates.

# School activity

Students from 32 schools across the UK participated in the Zone.

School	Students logged in	Active users	Chats attended	Chat lines (total)	Chat lines (per user)	Questions approved	Votes
Co-op Academy Manchester, Manchester (WP)	89	60	6	532	9	5	10
The City of Leicester College, Leicester (WP)	35	33	2	477	15	6	0
Tolworth Girls' School and Sixth Form, Surbiton	35	33	2	129	4	1	24
Rockland St Mary Primary School, Norwich	33	32	2	428	13	0	0
Trinity Church of England School, Belvedere, Belvedere	36	30	2	247	8	0	5
John F Kennedy Catholic School, Hemel Hempstead (U)	32	29	1	443	15	4	26
Caroline Chisholm School, Northampton	57	28	1	224	8	13	25
Darrick Wood School, Orpington (U)	27	27	1	431	16	14	27
Ark Soane Academy, London (WP)	27	27	2	239	9	1	22
The Holmesdale School, Snodland (WP/U)	25	23	1	91	4	1	0
The Norton Knatchbull School, Ashford (U)	26	21	1	78	4	5	0
The Priory School, Shrewsbury (U)	20	19	1	259	14	0	0
Beaulieu Convent School, Jersey (U)	15	15	1	91	6	0	5
KEVI Northfield School for Girls, West Midlands (WP)	14	14	1	136	10	0	11
Widnes and Runcorn Sixth Form College, Widnes	35	13	1	38	3	2	7
Balwearie High School, Fife (WP/U)	14	12	1	86	7	0	6

Funded by:

New College Swindon, Swindon (U)	12	12	3	68	6	0	3
Hills Road Sixth Form College, Cambridge	35	11	1	36	3	5	5
Lochend Community High School, Glasgow City (WP)	12	11	1	62	6	0	2
Queen Elizabeth's Girls' School, Barnet (WP)	17	10	1	23	2	0	2
The Cooper School, Bicester (U)	10	10	1	103	10	0	0
Ingoldmells Academy, England (WP/U)	10	10	1	121	12	0	7
Sir Harry Smith Community College, Peterborough (U)	9	9	1	61	7	3	8
Exeter College, Exeter	10	9	1	58	6	0	0
Furness Academy, Barrow-in-Furness (WP/U)	10	9	1	124	14	0	8
Coleg gwent, Torfaen	11	9	1	42	5	0	0
Maiden Erlegh School in Reading, Reading (WP)	8	8	1	77	10	2	3
Lanark Grammar School, South Lanarkshire (U)	8	8	1	37	5	0	0
Mackie Academy, Aberdeenshire (U)	5	4	1	30	8	0	0
Ethos College, Dewsbury (WP)	5	2	1	28	14	0	0
City of London Academy, Highgate Hill, London*	1	1	1	127	127	0	1
Oasis Academy Sholing, Southampton (WP)	1	1	0	0	0	3	1

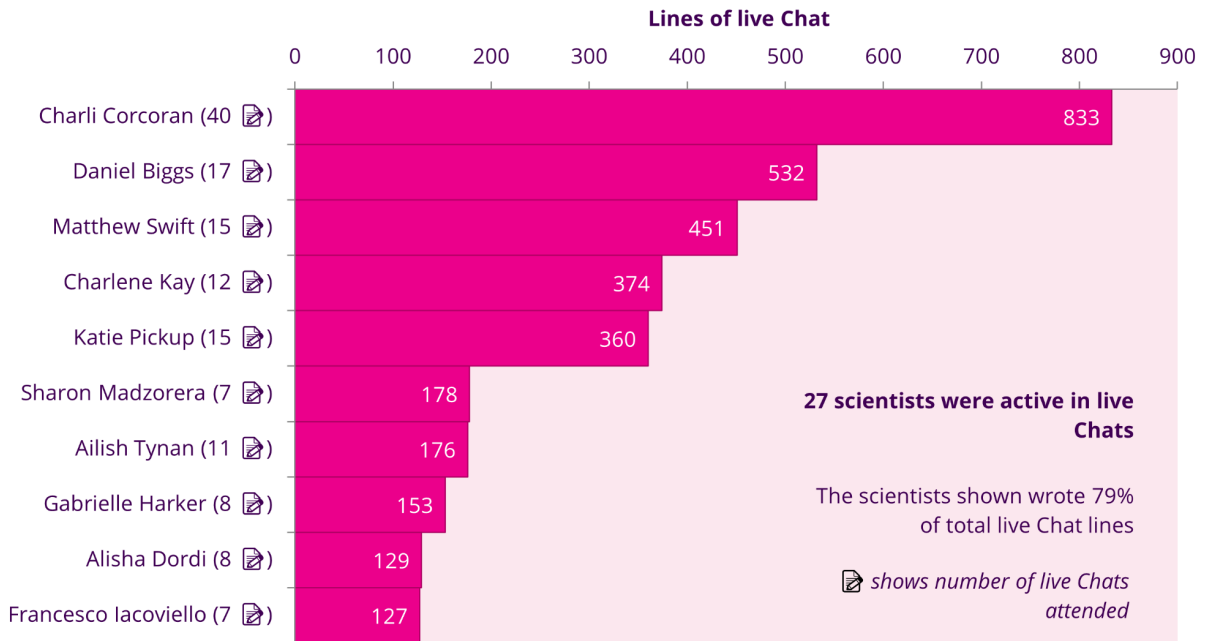
\* In these chats teachers typed questions on behalf of their students, with the chat displayed on a screen.

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](https://about.imascientist.org.uk/under-served-and-wp)

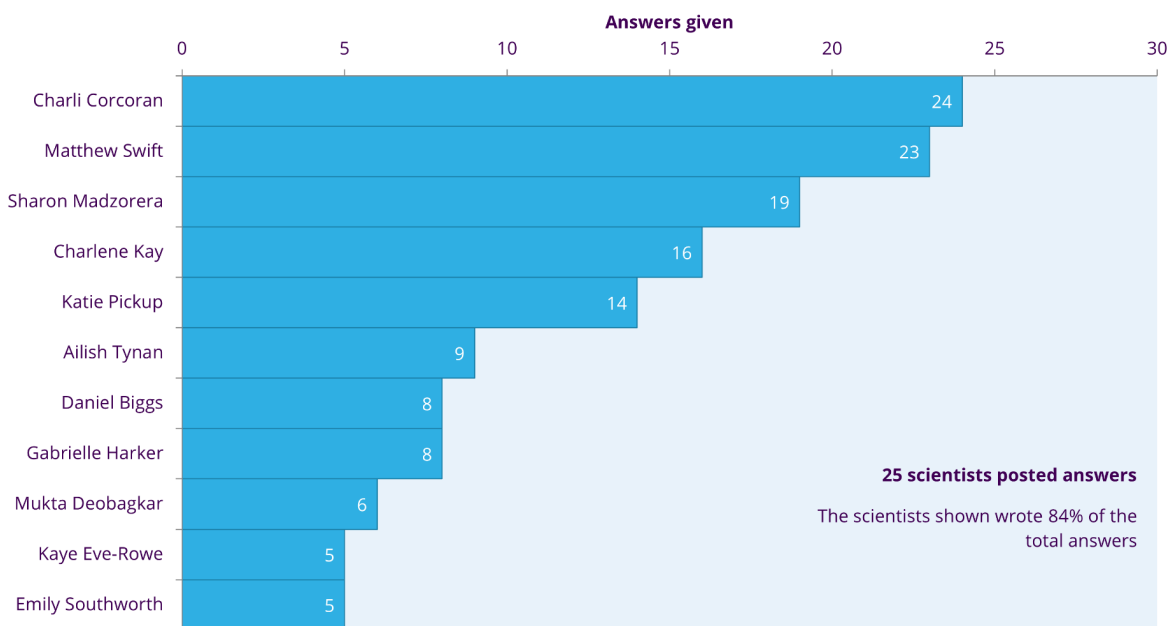
# Scientist activity

During the Zone the scientists interacted with students by writing 4,187 lines of live Chat, and providing 164 answers to 65 posted questions. On average, 4 scientists took part in each live Chat.

## 10 most active scientists in live Chats



## 10 most active scientists in posting answers





## Good engagement

Asking questions they find interesting and relatable is important to support students' science capital<sup>1</sup> and makes them more likely to see science as something 'for them'. These interactions are especially helpful for students to see science as relevant.

**Student 1:** Why is your area of scientific discovery important to the ordinary citizen?

**Daniel (scientist):** we hope that by investigating the genetic mutation that causes disease we can improve on treatments and gain a better understanding

**Katie (scientist):** I work on understanding how the embryo develops, which is useful for improving things like IVF, helping understand infertility and helping develop new ways of testing whether drugs are harmful to a developing embryo

**Charlene (scientist):** I work on breast cancer, a cancer that affects many people. If we can figure out why breast cancer returns even after surgery removes it all and why patients stop responding to their treatments, we can help a lot of people.

**Student 1:** My french teacher used to tell us it would also come with health benefits.. Have you done any research into this? If so, what?

**Angela (psychologist):** There are some studies that suggest bilingualism might be associated with later onset of diseases like dementia, so this is a possibility. However, the research findings in this area are mixed (not all studies show this) and it is not clear whether this is causal (does learning a language actually cause those health benefits)

Subject specific questions are great to generate interest in the subject area and build on existing knowledge.

**Student 1:** Why are cells so unique?

**Daniel (scientist):** they have evolved for a specific purpose

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<sup>1</sup> [about.imascientist.org.uk/student-impact](http://about.imascientist.org.uk/student-impact)

**Katie (scientist):** all the cells in your body have the same DNA! but they all do different things because different bits of DNA are used in different cells

**Student 1:** Do you think genetic engineering is ethical? Will it create problems for future generations?

**Regan (scientist):** I think there's scope to use it, but there are challenges that applications get used correctly. The movie Gattaca is a good example of this

**Charlene (scientist):** I think it is ethical if it's done to help some diseases but it could also get out of hand if not regulated. There is already a fear that people who don't have a lot of knowledge on the subject will start trying to use these techniques

Information and advice about scientists' careers can show students the range of possibilities for working in science and what they need to do to get there.

**Student 1:** What is the biggest thing you have done in your job?

**Daniel (scientist):** I have been author on a few publications but the biggest was making the cover of nature a few years ago

**Katie (scientist)** big but also tiny... i spent six weeks recently trying to harvest lots of tiny cell structures so that i could extract their RNA. This meant I had to spend 4h on a saturday and 4h on a sunday for three weekends so that felt pretty big!

**Student 1:** Are the careers you are currently doing the first career in genetics you have done? and have you preferred this to any previous careers?

**Daniel (scientist):** I had the beginnings of a career in the gambling sector but I much prefer science

**Matthew (scientist):** I move into this career straight from my PhD which I moved into straight after university, but many of my colleagues have come from all sorts of fields completely unrelated to science

Conversations like this are great to build a rapport between the scientists and students. It encourages students to see scientists as “normal” people with interests and hobbies.

**Student 1:** what is your least favourite subject at school?

**Gabrielle (scientist):** mine was maths. What's yours??

**Student 1:** Mine is Drama!

**Emily (scientist):** Music for me! I was so bad at composing even the teacher laughed at me -  
oops

**Student 1:** What's your favourite movie?

**Charli (scientist):** The Lord of the Rings, what's yours?

**Student 1:** The shining

**Charli (scientist):** ah good choice!!



## Scientist of the Week

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

The Scientists of the Week were:



**Daniel Biggs**, Lab manager at Wellcome Centre for Human Genetics



**Matthew Swift**, PhD student at the University of Nottingham

## Scientist Winner

The overall winner, with the most votes at the end of the Zone was:

- **Charli Corcoran**, Zebrafish Facility Technician for the Institute of Genetics & Cancer

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



" I had a fantastic time participating in the genetics zone over the last month and I very much looked forward to the chats and the questions you all asked on the Ask page. I was blown away by your enthusiasm and your interest in what we do, why we do it and of course the question that made us all stop and think: what might we be doing in 10 years' time?"

You can read their full statement at

[genetics22.imascientist.org.uk/2022/12/06/a-thank-you-from-your-winner-charli-corcoran](https://genetics22.imascientist.org.uk/2022/12/06/a-thank-you-from-your-winner-charli-corcoran)

# Feedback

Students loved the chance to chat with your scientists, particularly hearing about university preparation for the sixth form students and the weird and wonderful aspects of Science Fiction/Future for the lower school students. **Teacher**

Thank you for answering all of the questions I've provided to you. The information you've provided has been amazing. Much appreciated from me!

**Student**

Thank you for telling us about your careers, it was really interesting !

**Student**

Enjoying the second week of live chats. The students we have been talking to are so enthusiastic and engaged - each chat has been so different

**Charli** (scientist)

A great session from @imascientist yesterday. Students loved chatting to your friendly Geneticists about life, university and everything

**Teacher**

It was a great experience and a fantastic opportunity for the students. They were really engaged and the activity created a really great vibe in the class.

**Teacher**

It's been very insightful - thank you so much for your time :))

**Student**