

May 2021

The Orange Zone (orange21.imascientist.org.uk) ran for 4 weeks from 4 to 28 May 2021. It was funded by **The Science and Technology Facilities Council (STFC)** and **The Royal Society of Chemistry (RSC)**.

The Zone was general science-themed, featuring 29 scientists working across the UK in a range of scientific disciplines.

7 of the participants reported being members of the RSC, and 7 were either funded by STFC, or worked at, or used data from, an STFC facility. Additional RSC and STFC-related scientists were invited, but were unable to take part on this occasion.

Key activity figures

Schools	19
Students logged in	865
Students active	91%
Scientists	29
Questions asked	314
Questions approved	225
Answers given	287
Scientist comments	85
Student comments	2
Live chats	44
Lines of live chat	19,308
Average lines per live chat	429
Votes cast	548

Scientists

29 scientists created a profile in the Zone.

You can see who took part at orange21.imascientist.org.uk/scientists

The winning scientist with the most votes from students was **Emma Yhnell**, lecturer in neuroscience at Cardiff University.

Students

865 students from 19 schools across the UK logged into the Zone.

58% of active students were from target schools: 43% from widening participation schools and 19% from underserved schools.

Live chats

44 live chats took place during the activity: 39 were school classes booked by teachers and 5 were additional chats, open to all the students.

There were 3 live chats where teachers asked questions on behalf of their students. Therefore, the number of students reached will be higher by about 75.

On average, 6 scientists attended each live chat.

School activity

Students from 19 schools across the UK participated in the Zone. In addition to the 39 live chats booked by teachers, there were 4 Thursday evening chats for the students and their families, and 1 live chat on the final day of the Zone where the winning scientist was announced.

School	Active students	Chats attended	Chat lines (total)	Chat lines (per student)	Questions approved
Denny High School, Falkirk	150	5	1168	8	28
Reading Girls' School, Reading (WP)	136	2	1214	9	12
Aylesbury High School, Aylesbury (U)	86	3	1076	13	5
Prendergast School, London	77	5	943	12	124
Hornsey School for Girls, London (WP)	67	3	598	9	6
St Bridget's Primary School, Glasgow (WP)	62	4	1661	27	0
d'Overbroeck's, Oxford	45	2	363	8	12
The Cardinal Vaughan Memorial RC School, London	33	2	298	9	12
Coltishall Primary School, Norwich (U)	28	1	432	15	2
Malmesbury Primary School, Morden (WP)	26	1	334	13	0
Kenmont Primary School, London (WP)	22	5	604	27	5
Harrow Way Community School, Andover (WP/U)	19	1	183	10	8
Mathilda Marks-Kennedy Jewish Primary School, London *	14	2	283	20	8
St Benedict's Catholic College, Colchester	10	1	72	7	0
Aberdare Community School, Aberdare (U)	7	4	149	21	0
The Basildon Upper Academy, Basildon (WP/U)	6	1	65	11	0
Oasis Academy Sholing, Southampton (WP)	2	1	18	9	3
Joyce Frankland Academy, Newport (U)	1	1	24	24	0
St Edmund's Catholic Primary School, Enfield (WP) *	0	2	0	N/A	0

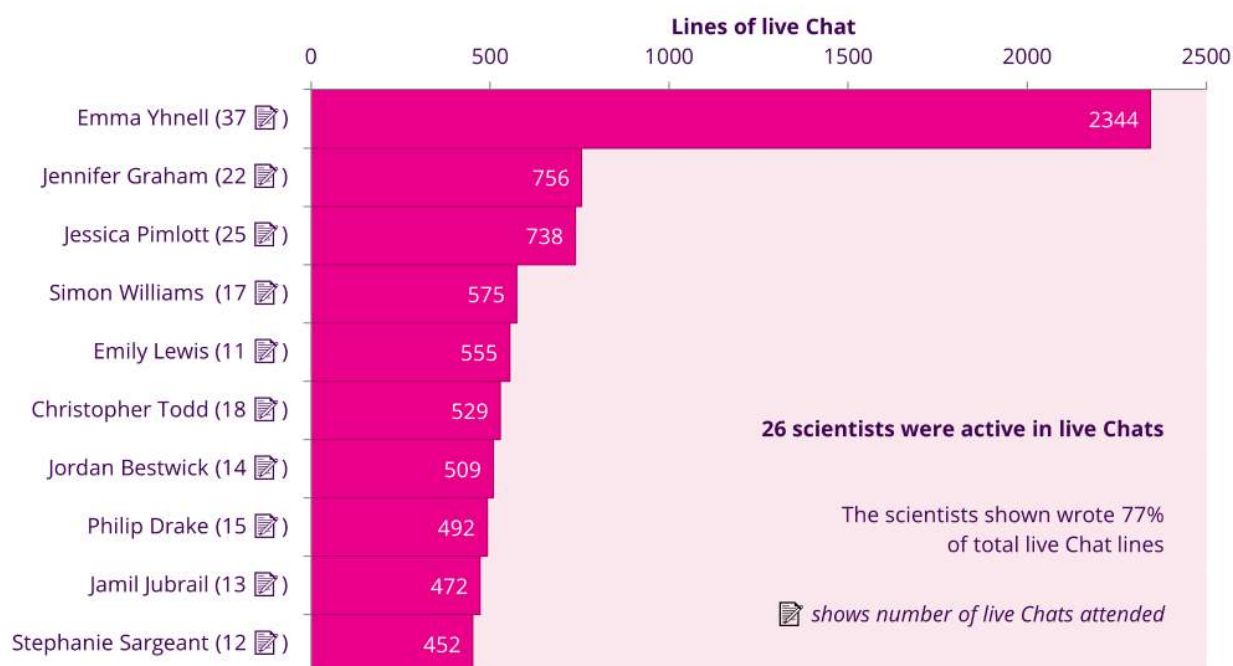
* In 3 of these chats teachers typed questions on behalf of their students, with the chat displayed on a screen.

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

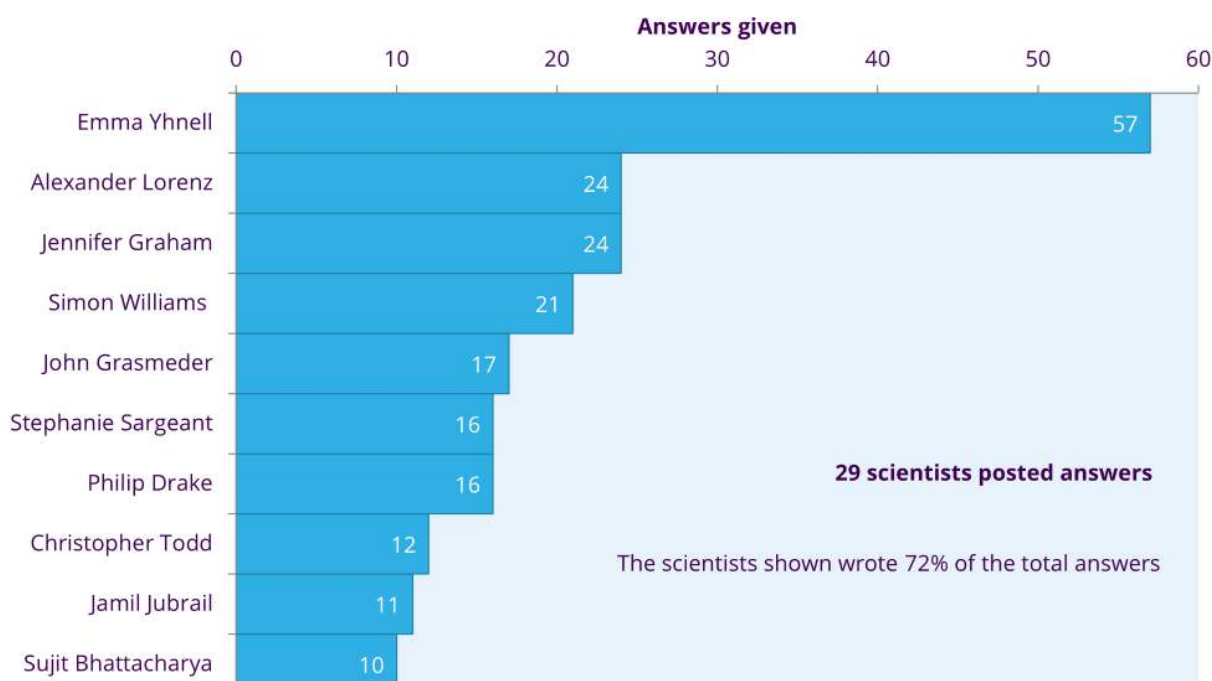
Scientist activity

During the Zone the scientists interacted with students by writing 9,638 lines of live chat, and providing 287 answers to 314 posted questions.

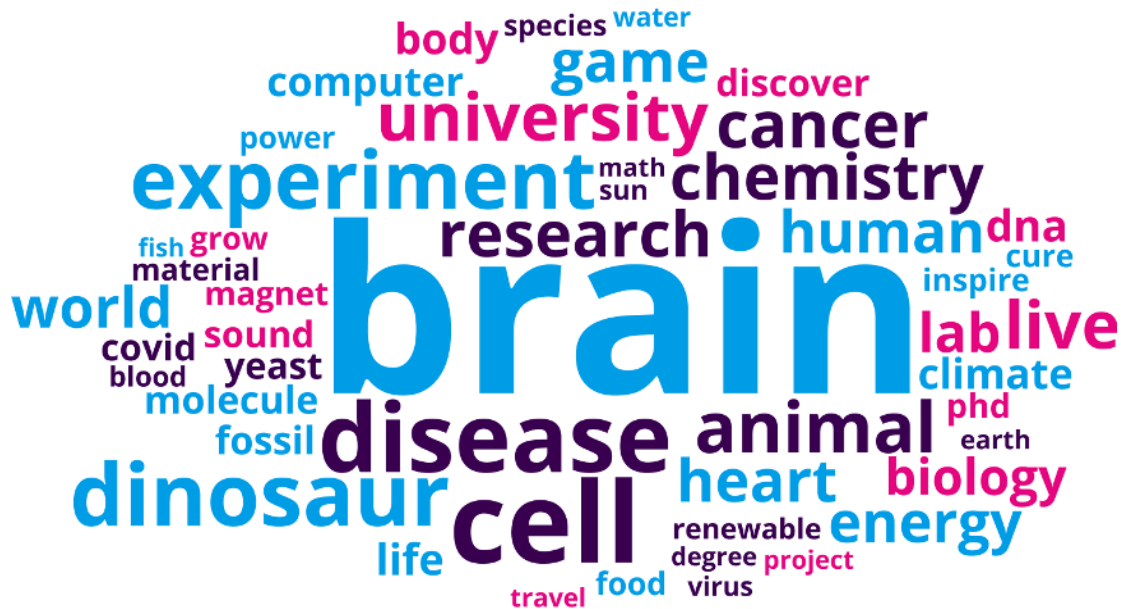
10 most active scientists in live Chats



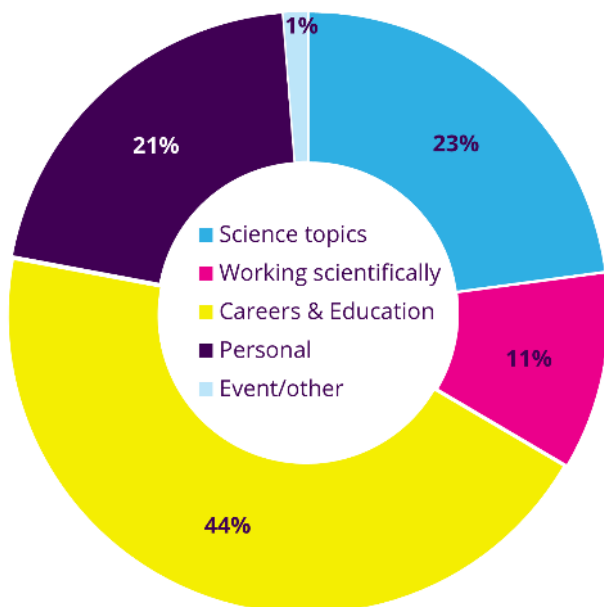
10 most active scientists in posting answers



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



The chart below shows a breakdown of questions students sent to the scientists. Examples are coloured by category.



Could you spray stem cells onto a wound to make it heal much faster?

What renewable power source creates the most energy; a wind turbine or a solar panel?

Do you fear the rise of a pathogen completely immune to antibiotics; is such a thing possible?

Do you think you make a difference to this world?

What would you say to some one who wanted to go into science?

What does PhD mean?

What's the silliest, most fun science experiment you have done?

How do you feel about the unknown?

What's your favourite type of cake?

Good engagement

Students discovered what working in science entails, including that there are lots of different types of science, and it's not all lab work.

AustinD (student): what's your favourite animal

Stephanie (scientist): Can never choose between a whale shark and a polar bear!

AustinD: why can you never choose between a whale shark and a polar bear?

Stephanie: Good question, I can never choose because I was lucky enough to see both of these whilst working at sea and both experiences were so exciting that I can't choose one or the other

AustinD: wait you got to see a whale shark and polar bear! Lucky

Stephanie: Yes, we did. I feel incredibly lucky to have seen them, I never thought it would be something I'd get to do but science can take you anywhere :)

AustinD: wow 🥰 that makes me want to be a scientist! 🧑🔬

Stephanie: That's great! They're are loads of great adventures you can have as a scientist, we call ourselves field scientists as we work out and about studying the environment as well as in a lab. I'm sure you'd make a great scientist!

The scientists shared their own education and career journeys, showing that there is no single path into a STEM career, and that it's ok for students not to have a plan!

Student: how did you get started as a scientist

Paige (scientist): I chose biology and maths for A Level, and applied for a science degree! I am doing a placement at the moment but next year I will start my final year of university :)

Philip (scientist): I never really planned to be a scientist. I just kept studying what I loved and found interesting. If you do what you love you find your own way.

Edward (scientist): I also did History for A level, along with maths, further maths and physics because I think it is important to have balance between humanities and science. History is really good for critical thinking, especially at A level

Paige: I did a similar thing! I wanted a balance so chose french and psychology alongside the sciences

Edward: It is worth it I think. Having good academic skills is important but there are so many other soft skills, like communicating difficult ideas, writing about your work, working together in teams.

Emily (scientist): I never really planned on becoming a scientist, but very happy it happened! took Maths, French, Physics and English at A level then engineering at university. Then I joined a government lab after leaving uni and went from there!

One scientist was able to offer some helpful advice to a student feeling apprehensive about moving from school to college. The student found comfort in a scientist having a similar experience.

deny434pay (student): When you had your GCSE's sorted when you were little do any of you guys have any idea what it was like to leave school and head for collage because inside of me I am starting to feel sad to think about it and need help advice plz :(

Emily (scientist): I had no idea what it was going to be like! don't worry, I think most people go through this

deny434pay: thank you very much I needed that :)

Emily (scientist): I'm glad! try not to worry, most likely everyone else is feeling the same thing

Students were also interested in what the scientists do outside of work. Understanding that scientists are “regular people” helps students relate to them.

jackson (student): what do you in your spare time

Harindi (scientist): I go to the gym / dance / organise STEM related events

jackson: very smart

Paige (scientist): I like to go on runs in the countryside, or go for a meal with my friends! Or watch netflix

jackson: what netflix do you like?

Paige: I like formula 1 drive to survive (about really fast cars), but I also like comedy programmes like New Girl :)

LorenzoN (student): I like formula 1 drive to survive to: I am on season two

Paige: it is really cool, isn't it! I just finished season two a few weeks ago

LorenzoN: dont tell me what happens

Paige: I won't, I promise! Do you have a favourite driver?

LorenzoN: Even though he does not win I like leclerc

Paige: I like leclerc too! I like sainz and ricciardo too

Scientist winners

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

The second and third Scientists of the Week were:

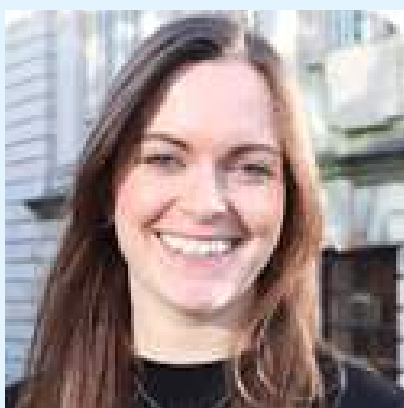
- **Sujit Bhattacharya**, Principal Engineer at Evonetix Ltd., and the founder of several other engineering companies and foundations.
- **Jordan Bestwick**, a postdoctoral researcher at the University of Birmingham studying the diets of dinosaurs and extinct reptiles via scratches on their teeth.



The first Scientist of the Week was also the Zone Winner, with the most votes at the end of the Zone:

- **Emma Yhnell**, lecturer in neuroscience at Cardiff University.

As Zone winner, Emma received £500 to spend on further public engagement projects.



Here's what Emma had to say about her experience:

"I have given lots of talks to different audiences and some of the questions that [the students] asked ... were the most curious and fascinating questions I have ever had.

[Taking part] helped to remind me how brilliant my job is.

Now more than ever, the effective and innovative communication of science has never been more important. Long may *I'm a Scientist* continue and if you are even half tempted to give it a go next time, I cannot recommend it highly enough!"

You can read Emma's full statement at

orange21.imascientist.org.uk/2021/06/01/a-thank-you-from-your-winner

Feedback

This is a fantastic way to show pupils that scientists are real people. [Students] have really enjoyed so far. It is an excellent resource. Thank you.

Teacher

Thank you! It was great - the students said the best thing was that the scientists were very approachable about complicated stuff.

Teacher



Jamil Jubrail
@Jamil_Jubrail

Can't believe #IASUK is over already! What a great month it was- lots of excellent and intriguing questions from all the students and I met some amazing new scientists in the process! Would recommend anyone thinking about it to take part! @imascientist



Dan Cornwell
@AstroDanJC

Enjoyed answering students questions today on @imascientist. It was interesting to learn about their scientific curiosity, some questions have kept me thinking!

Conversation ranged from professional to simple questions, they were answered with sensitivity and engaged pupils as they were able to converse on their level.

Teacher

thanks everyone for my questions I have learned a lot and I have really enjoyed the chat!

Student



Jessica Pimlott
@PimlottJessica

Enjoyed answering some science and career questions from students across the UK this evening!

These text-only sessions are great for encouraging children and young people to come out of their shell and ask questions!



Denny High Chemistry 🧪🧪
@DHSChemistry

The final session of our @DennyHighSchool S1 pupils getting the chance to chat to real-life scientists about what they do and why. Can't recommend @imascientist enough to science teachers looking for activities in June. Emma gave my favourite scientist response ever 😊😊

The Zone winner, Emma Yhnell was inspired to write a blog about her *I'm a Scientist* experience. You can read it at emmayhnell.com/2021/05/23/scientists-are-people-too