

# Planet Earth Zone

## January/February 2021

The **Planet Earth Zone** ran from 11 January to 5 February 2021 and was funded by the Royal Institution (Ri). The activity was themed around the Ri's CHRISTMAS LECTURES 2020, "Planet Earth, a User's Guide".

The Zone featured scientists and other contributors who were involved in producing the lectures, as well as scientists working in related fields, such geology, environmental science, oceanography, and sustainability.

### Key activity figures

Activity figures for CHRISTMAS LECTURES zones	2020 zone	2013-19 zones average
Schools	27	27
Students logged in	1,637	709
Students active	63%	85%
Scientists/ contributors	44	27
Scientists/ contributors active	98%	96%
Questions asked	352	571
Questions approved	219	249
Answers given	278	320
Scientist/ contributor comments	83	41
Live chats (schools)	61	35
Lines of live chat	23,644	9,849
Average lines per live chat	272	277

### Scientists and contributors

43 scientists and lecture contributors took part. They included:

- **Alistair Young**, who monitors water quality and pollution as a Trustee for the River Wey Trust. Alistair contributed to lecture 2, "Water World".
- **Hazel Jeffery**, project manager at the National Centre for Atmospheric Science.
- **Liam Taylor**, PhD Student in climate science at the University of Leeds.

### Students

1,637 students from 27 schools across the UK logged into the Zone.

66% of active students were from target schools: 54% from underserved schools and 16% from widening participation schools.

### Live chats and questions

89 live chats took place during the activity: 61 were school classes, 24 were open chats accessible to members of the public, and 4 were for Ri Young Members.

An additional 11 live chats were booked, 9 were cancelled and 2 were 'school no shows'.

On average, 5 scientists/lecture contributors attended each live chat.

219 student questions were approved. There were 278 answers provided.

## School activity

Students from 27 schools across the UK participated in the Zone. There were weekly chats for Ri Young Members as well as daily chats open to primary school students.

School	Active users	Chats attended	Chat lines (total)	Chat lines (per user)	Questions approved
Bournemouth School, Bournemouth (U)	271	6	2,361	9	102
Parmiter's School, Watford	173	8	1,619	9	19
Kenmont Primary School, London (WP)	32	2	1,503	47	4
Corbridge Middle School, Corbridge (U)	87	6	1,225	14	7
Shirenewton Primary School, Monmouthshire	45	2	843	19	14
Northwood College for Girls, Northwood	48	2	816	17	2
St Bridget's Primary School, Glasgow (WP)	44	4	801	18	-
Dinglewell Junior School, Gloucester (U)	67	3	717	11	8
Richard Taylor CE Primary, Harrogate (U)	27	1	429	16	25
The Petchey Academy, London (WP)	29	2	410	14	14
The Mount School, York	21	2	318	15	-
Robertsbridge Community College, Robertsbridge (U)	39	6	308	8	5
The Dukeries Academy, Newark (WP/U)	33	2	308	9	1
Colne Community School, Colchester*	7	-	214	31	3
St Bede's Catholic Primary School, Carlisle	18	1	197	11	-
Royal Masonic School for Girls, Rickmansworth	14	2	178	13	-
Beaulieu Convent School, Jersey (U)	18	1	177	10	-
Ethos College, Dewsbury (WP)	11	3	150	14	-
Stirling High School, Stirling	19	3	134	7	-
The Holmesdale School, Snodland (WP/U)	8	1	104	13	3
Robert May's School, Hook (U)	7	1	102	15	-
Victoria Primary School, Edinburgh City*	1	-	100	100	-
Wigan and Leigh College, Wigan	21	2	98	5	-
The Palmer Catholic Academy, Ilford (WP)	6	-	22	4	7
Greenacre Academy, Chatham (U)	1	1	9	9	-
Earlscliffe (Sussex Summer Schools), Folkestone*	1	-	6	6	1
The Boulevard Academy, Kingston-upon-Hull* (WP)	2	-	4	2	2
Royal Institution Young Members	4	4	148	37	2

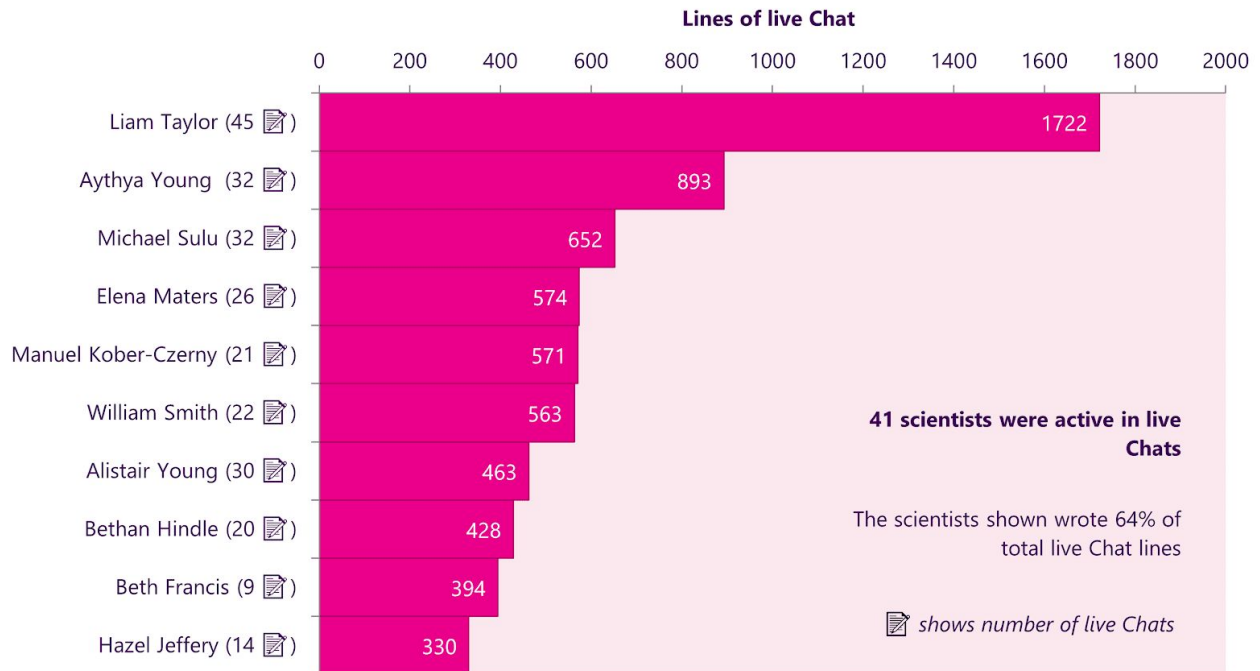
\* These schools did not book a live Chat for a class: students took part in an open chat

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

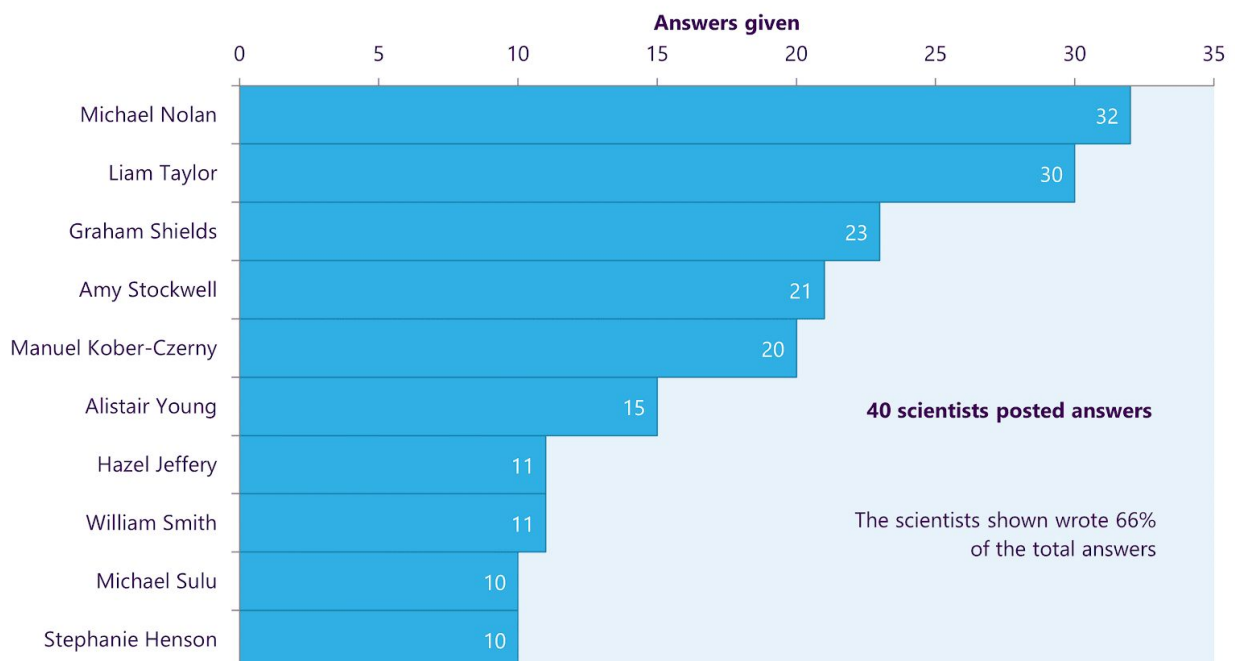
# Scientist activity

43 scientists and lecture contributors were active in the Zone, writing 10,284 lines of live chat, and providing 278 answers to 219 posted questions.

## 10 most active scientists in live Chats

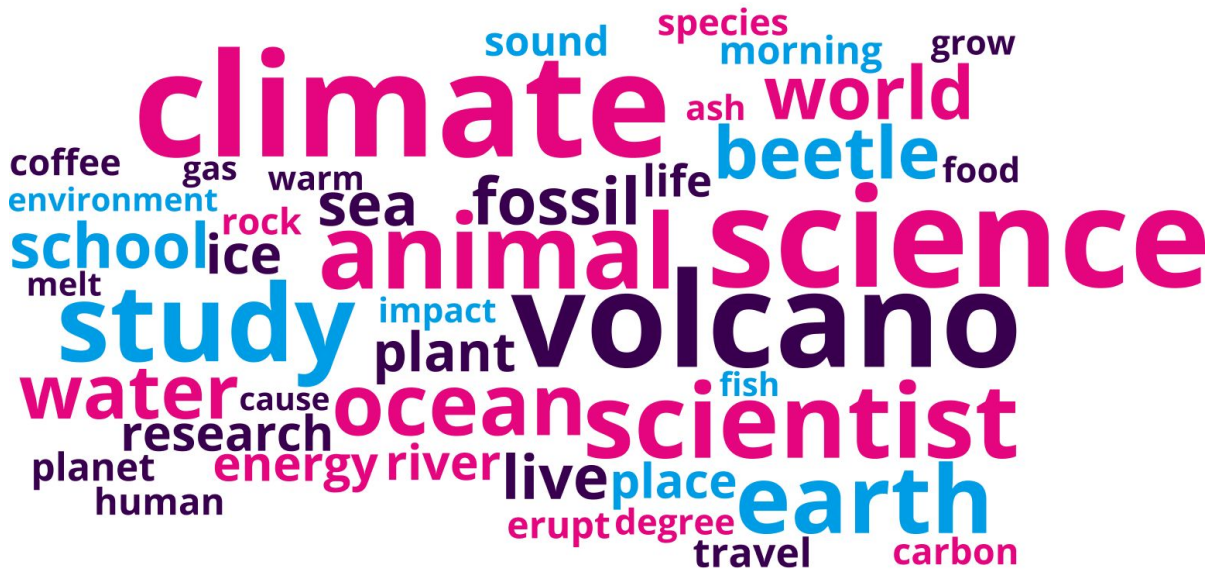


## 10 most active scientists in posting answers



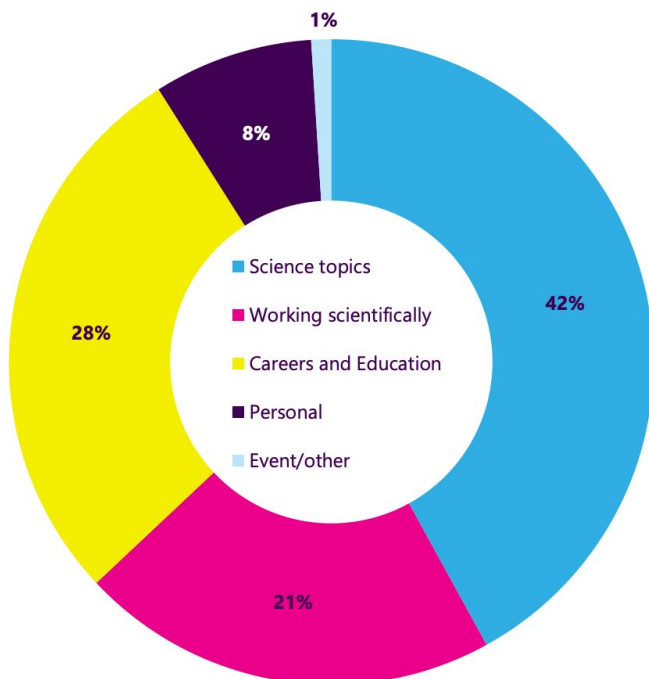
## Frequent words used in live chats

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



## Question themes and examples

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



What did you find most interesting about the Christmas Lecture?

What are your current predictions for future climate?

What is the most exciting experiment you have done?

Have you ever coded and if you have what have you coded?

What project have you worked on that you believe can change and help eradicate climate change?

Have you struggled to get to the position you're in now as a scientist?

What inspired you to become an oceanographer and what field of science do you love the most?

What insect/bug is your favourite?

## Examples of good engagement

In live chats, students learnt that being a scientist requires perseverance, and that not all scientists had a career plan:

**Student:** Have you ever had to overcome any obstacles on your way to becoming a scientist?

**Will (scientist):** Definitely! There have been topics I've really struggled with did really badly in exams, either at school, college or university.

**Will:** It can also be depressing when an idea or experiment totally fails to work out.

**Will:** You need grit and determination to keep going and work through the hard parts.

**Teacher:** @all What inspired you to work in the field you do today? Was it planned or did it happen by accident!?

**Michael (scientist):** Kind of accident, I think I plan more now than before, but I just followed things i found interesting

**Liam (scientist):** I knew I wanted to work vaguely in climate science, but the drive to work in icy regions is because I thought they were the last place on Earth that were 'untouched' and I thought I should work there to help keep it that way. Turns out... I was very wrong... :(

**Will (scientist):** I always loved computers, programming and problem solving so knew I wanted to do something in that area. But everything else was more like an accident than planned.

**Beth (scientist):** I think kind of an accident, especially the specific area. I went out to Hawai`i to meet the team I'd be working with on coral reefs, ended up on a cruise to help out and got totally hooked on the deep sea

**Bethan (scientist):** By accident really! I did a degree in Zoology, spent the whole 3 years saying that didn't mean I was going to work in a zoo afterwards and then went and worked in a zoo for a year... So I can't really claim to have planned much of it!

**Polly (scientist):** Completely by accident! I knew I wanted to do something to do with climate change, but it took me several years to figure out how I could best do that

Students also discovered how climate science is relevant to everyday life:

**Student:** do carbon emissions and pollution affect global warming and how ?

**Liam (scientist):** Absolutely! Imagine we've got a big blanket around the Earth keeping us warm - carbon emissions make that blanket thicker and thicker. Suddenly our nice cosy warm planet is getting hotter and hotter...

**Student:** which then can increase the possibility's of natural hazards e.g. Tropical storms?

**Liam (scientist):** Absolutely correct. We know that storms are becoming more intense and more likely with climate change as the atmosphere is being affected in all sorts of weird ways. In the UK, our winters are getting wetter and summers hotter.

There were practical discussions too, with students keen to know what they can do to help the climate emergency:

**Student:** What 1 thing could I tell my family to do to reduce our carbon footprint?

**Amy (scientist):** One of the easiest things to do at home is don't waste food. It takes a lot of energy to make and travel to your house.

**Elena (scientist):** Great question! I think a big thing we could all do would be to fly less - which I admit I find difficult as my family is in Canada.

**Fabian (scientist):** Eat less meat and use public transportation, cycle or walk as much as possible.

**Hazel (scientist):** That's a good one, switch to a renewable electricity tariff. Though I'm afraid that it will all take us doing a lot of things differently to really make a difference.

**Hazel:** Check out this web site <https://www.count-us-in.org/16-steps/>

**Fabian:** And less dairy products. Red meat (excluding game) and dairy have a huge footprint

**Amy:** Great website! I need to share that with my colleagues. We are all trying to do our bit, but find it difficult to know what to do

## Feedback

Before the chat closes I'd just like to say thank you for giving your time this afternoon. As an Earth Scientist in another life it is great to hear your experiences. **Teacher**

Thank you for all you amazing answers! Have a great day! 🧑🏻‍🔬 🧑🏻‍🔬 🧑🏻‍🔬 🧑🏻‍🔬 🧑🏻‍🔬 🧑🏻‍🔬 🧑🏻‍🔬 🧑🏻‍🔬 🧑🏻‍🔬 🧑🏻‍🔬 👍 😊

**Student**

thanks for the really nice opportunity i enjoyed it ALOT!!

**Student**

It's so fun talking to young people about climate change because they're very optimistic. They are all very solutions oriented and I think the world will be a brilliant place if they are the future!

**Liam Taylor** (scientist)

Huge thanks to @all the scientists for chatting with my students today. You've made me laugh and answered some excellent questions from my students. I'm back later with another class!

**Teacher**

The questions have been brilliant! As always, proud of our P7s. The answers are amazing and so incredibly interesting. What a variety of jobs!

**Teacher**

I could talk like this forever!

**Student**

The Planet Earth Zone was produced by **Mangorolla CIC** for **The Royal Institution**, with support from:

