

## April–July 2020

**In March 2020, schools were closed due to the COVID-19 pandemic, creating uncertainty in education. Many STEM enrichment activities for students were cancelled.**

*I'm a Scientist, Stay at home* was launched to allow school students to stay connected with STEM from April to July. Students could log in and take part whether they were at school or at home, reconnecting with their teachers and each other.

2,500 STEM professionals signed up to take part and inspire students across the UK. Over 800 schools registered for their students to stay engaged with science, engineering and maths.

The Physics Zone ran over 12 weeks as part of the *Stay at home* activities, instead of the usual two. There were 97 live chats, compared to the usual two week zone average of 16. This Zone was funded by The Ogden Trust with additional funding from UKRI.

- 120 scientists created profiles in the Zone, and 109 engaged with students in live chats and answering questions. 81 of these scientists were new to the *I'm a Scientist* activities.
- Scientists from a broad range of areas and career stages took part. For example, Ry Cutter is a PhD student studying colliding black holes, Tom Louth designs instruments for the UK Astronomy Technology Centre, and Dipendra Mistry is an engineer working with radiowaves. On average, 6 researchers attended each live chat session.
- 1,186 students from 52 schools all over the UK logged into the Zone. 31 of these schools had taken part in a previous *I'm a Scientist* activity.
- 16% of active students were from Widening Participation schools, and 44% from Underserved Schools.

## Key activity figures

This zone was one of the busiest in *Stay at home*, with a considerably higher than average number of schools and students logged in - almost 1,200. This zone had the highest number of live chats out of all the *Stay at home* zones (97).

Students were particularly interested in the universe, galaxies, life on other planets and other areas scientists were researching related to space. Over 40% of all questions in Ask were to do with Science Topics. There were conversations about challenges the scientists faced in their work, and their school experiences.

	ZONE	STAY AT HOME AVERAGE
Schools	52	32
Students logged in	1,186	682
% of students active	65%	57%
Questions asked	350	178
Questions approved	275	151
Answers given	658	421
Scientist comments	135	95
Student comments	19	18
Votes	706	350
Live chats	97	55
Lines of live chat	22,039	13,374
Average lines per chat	227	227

Fewer students than anticipated took part in the activities, likely due to difficulties teachers faced with remote teaching and online learning.

28% of non-participating teachers told us they had been too busy to fit in a live chat due to an increase in workload. Others shared that their students were particularly struggling with online curriculum learning, and were unable to offer extra-curricular activities.

A majority of students took part from home. This led to a lower average percentage of active students (57%) due to challenges faced by teachers to engage classes and issues with access to technology at students' homes.

## School activity

Chatsmore Catholic High School, Worthing [U] (128 👤 11 💬)	St Philip's Catholic Primary School, Leeds (15 👤 30 💬)
Irchester Community Primary School, Wellingborough (91 👤 17 💬)	The British School Yangon, Yangon, Myanmar (14 👤 17 💬)
The University of Birmingham School, Birmingham [WP] (81 👤 10 💬)	Robert May's School, Hook [U] (13 👤 13 💬)
Kingsmead Academy, Taunton [U] (51 👤 0 💬)	Denny High School, Falkirk (13 👤 8 💬)
Cransley School, Northwich (44 👤 8 💬)	Gumley House RC Convent School, Isleworth (13 👤 4 💬)
Kings Priory School, North Shields (35 👤 10 💬)	Longbenton High School, Newcastle-upon-Tyne [WP] (12 👤 7 💬)
Dinglewell Junior School, Gloucester [U] (33 👤 15 💬)	Dame Alice Owen's School, Potters Bar (11 👤 15 💬)
Spalding High School, Spalding [U] (32 👤 10 💬)	Hinchley Wood School, Esher (11 👤 8 💬)
Bournemouth School for Girls, Bournemouth [U] (29 👤 10 💬)	Burnside Business and Enterprise College, Wallsend [WP] (8 👤 9 💬)
More House School, London (29 👤 9 💬)	The Petchey Academy, London [WP] (7 👤 11 💬)
Trinity CE School, Belvedere (25 👤 11 💬)	Lady Eleanor Holles School, Hampton (7 👤 6 💬)
Chaulden Junior School, Hemel Hempstead [WP/U] (23 👤 14 💬)	Rampton Primary School, Retford [U] (5 👤 33 💬)
UTC Sheffield City Centre, Sheffield (22 👤 11 💬)	Redmoor Academy, Hinckley [U] (5 👤 20 💬)
Kingsbury Green Academy, Calne [U] (21 👤 9 💬)	The Derby High School, Bury [WP] (5 👤 14 💬)
Bedwas High School, Caerphilly [U] (21 👤 9 💬)	Brighton Hove and Sussex Sixth Form College, Hove (5 👤 8 💬)
Stirling High School, Stirling (19 👤 8 💬)	GEMS International School, Penang, Malaysia (5 👤 5 💬)
Transylvania College, Cluj-Napoca, Romania (18 👤 7 💬)	Priestley College, Warrington [U] (4 👤 11 💬)
Aylestone School, Hereford [U] (18 👤 5 💬)	New College Stamford, Stamford [U] (4 👤 10 💬)
Ernest Bevin College, London (17 👤 13 💬)	Kirkby Stephen Grammar School, Kirkby Stephen [U] (3 👤 21 💬)
The Arnewood School Academy, New Milton [U] (16 👤 6 💬)	Colton Hills Community School, Wolverhampton [WP/U] (3 👤 7 💬)



Ark Evelyn Grace Academy, London [WP] (3 👤 3 💬)
Mander Portman Woodward School, London (2 👤 20 💬)
Colchester County High School for Girls, Colchester (2 👤 16 💬)
St Bridget's Primary School, Glasgow City [WP] (2 👤 16 💬)
Heron Hall Academy, Enfield [WP] (2 👤 2 💬)
Mallaig High School, Highland [U] (1 👤 4 💬)
Loreto College, St Albans [U] (1 👤 3 💬)
Sir John Lawes School, Harpenden [U] (1 👤 1 💬)
Bexley Grammar School, Welling (1 👤 0 💬)
Riverside College Halton, Widnes (1 👤 0 💬)
Tonbridge Grammar School, Tonbridge [U] (1 👤 0 💬)

Map and table (left) show schools with students who actively participated in the zone.

Numbers next to schools represent the number of active users [👤] and average lines of live chat per active user [💬].

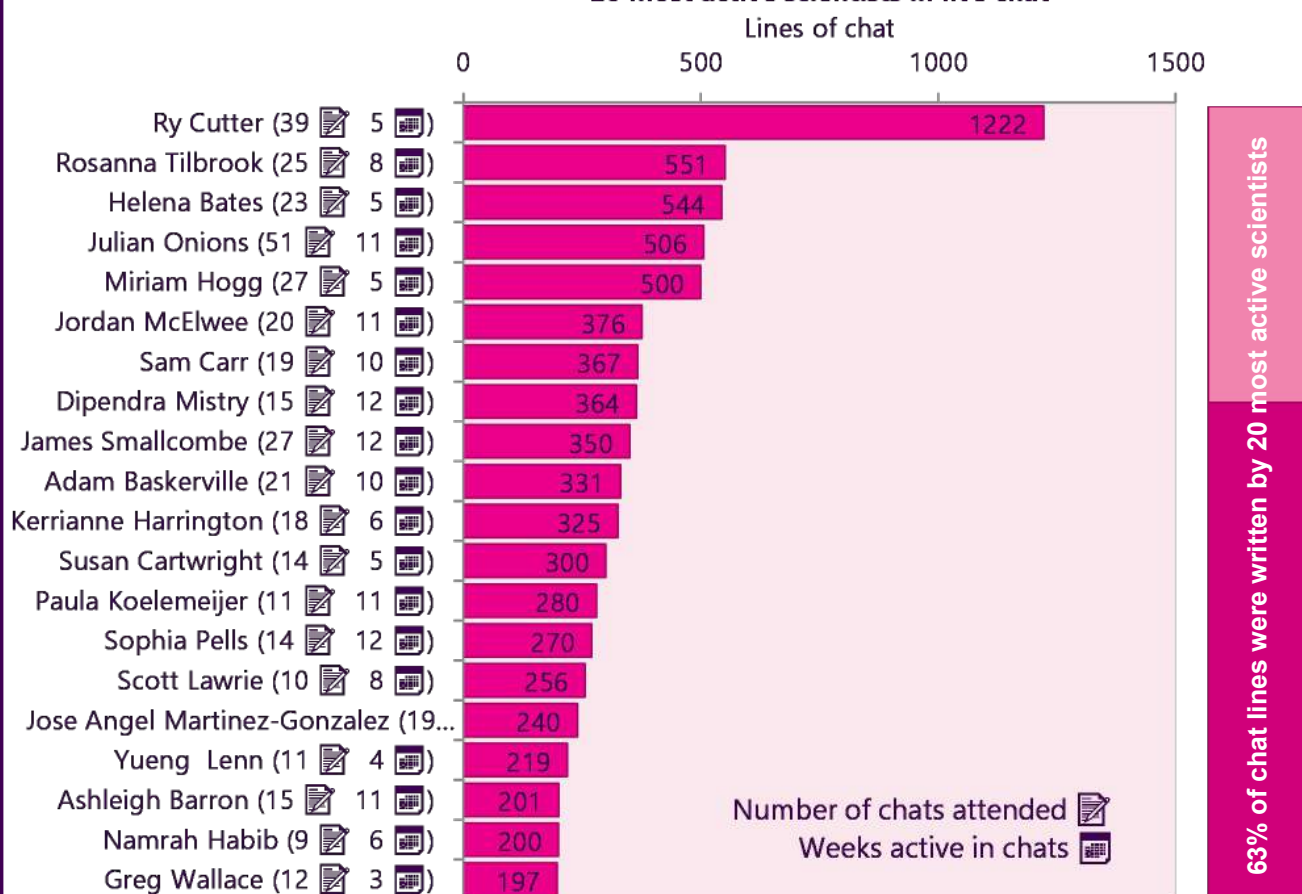
We want to increase the participation of under-represented groups going into STEM careers. Find out what we mean by our under-served (U) and WP schools (WP), and how you can support us in working with more of these at:

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

## Scientist activity

109 scientists were active in the zone, writing 12,132 lines of live chat and providing 658 answers to posted questions.

### 20 most active scientists in live chat



### 10 most active scientists in posted answers

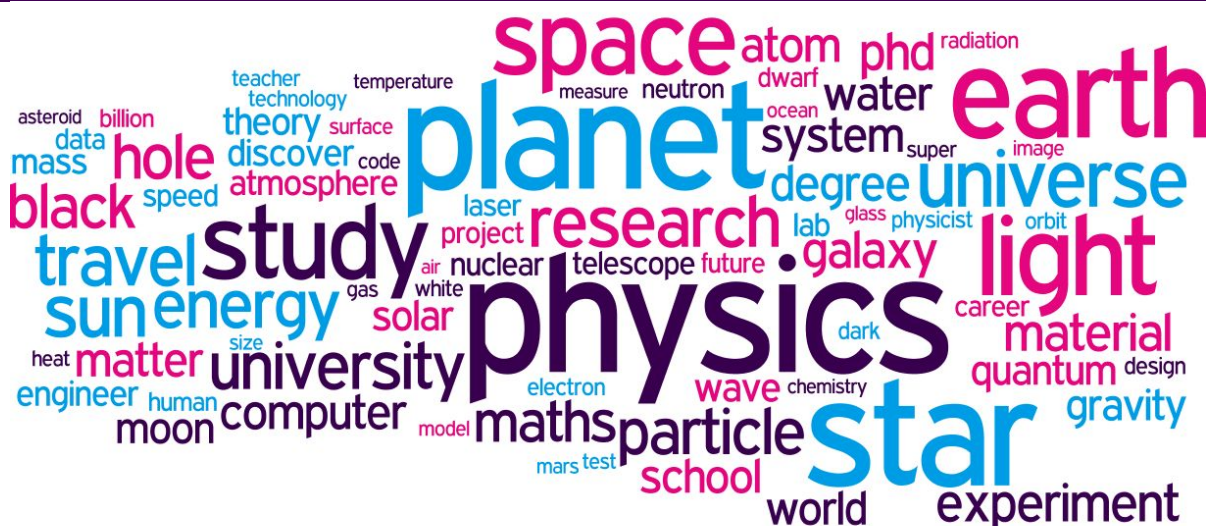


See all the participating scientists: [physics20.imascientist.org.uk/scientists/](https://physics20.imascientist.org.uk/scientists/)

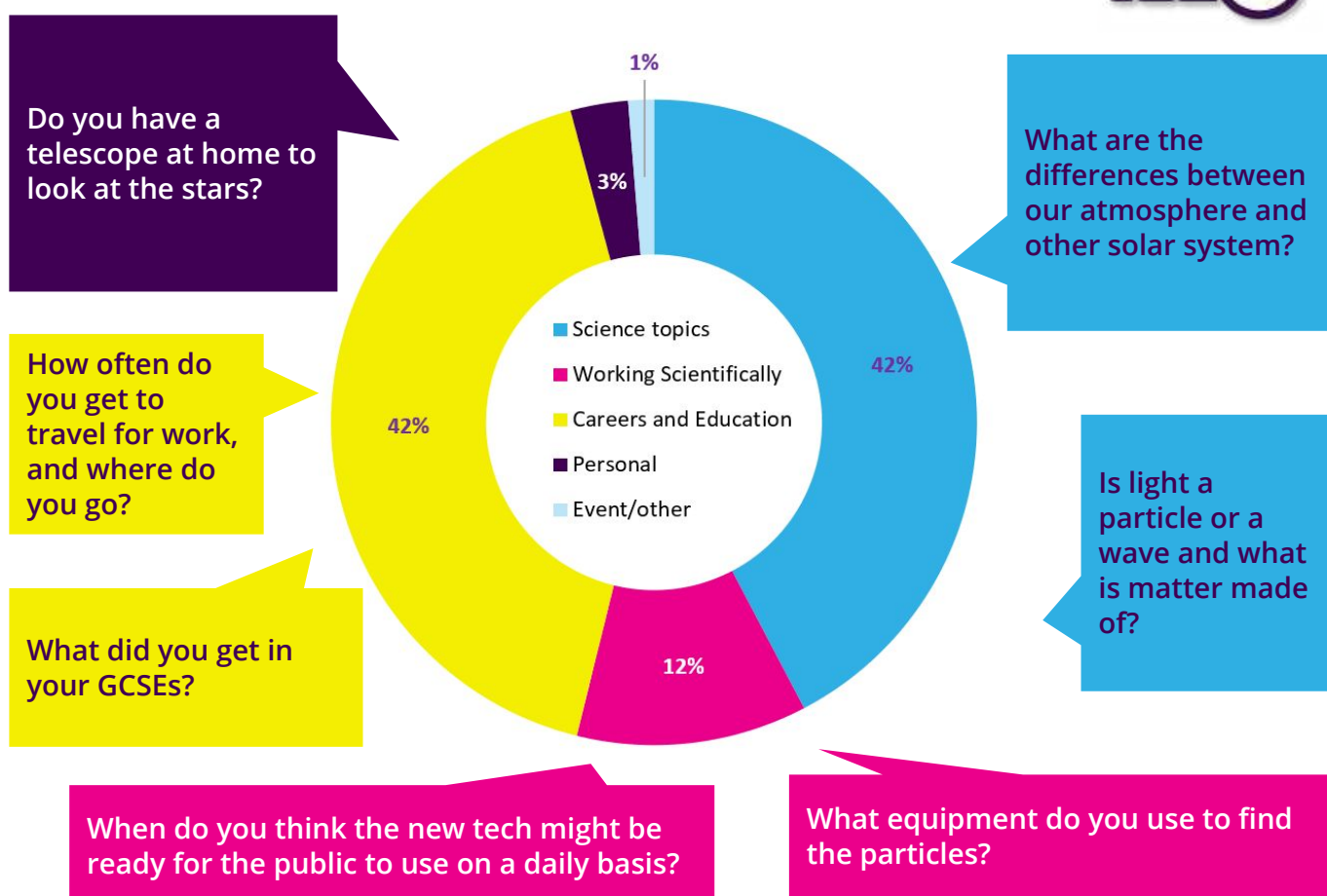


## Popular topics

## Frequent words used in live chats by students and scientists



## Question themes and example questions



## Examples of good engagement

Students asked scientists about their work and its processes. This increases the scientific knowledge of the students, as well as showing them the real life applications of science, such as in this example where Georgia's work could be used to help diagnosis of head injuries:

**ChloeC** @Georgia how does shining lasers into patients eyes help diagnose head injuries?

**Georgia** @ChloeC: Hey Chloe! When you hit you leg for example, you might see a bruise but along with that comes lots of chemicals to make the bruise happen. When you have a head injury we can't see these "bruises" on the brain.

**Georgia** @ChloeC: But we know lots of chemical responses are happening! There's a technique that uses lasers that measures how the laser changes when it bounces off surface. By bouncing the laser off the brain we'd see some chemical responses

**ChloeC** @Georgia: is this something the NHS would use to diagnose head injuries?

**Georgia** @ChloeC: We hope so! It's in very early stages but my aim is to develop a device that can be used outside of hospitals by paramedics to get early diagnoses!

**evansc20** @Georgia: Wow what a fascinating area of research! Definitely an area of medicine that needs funding/research.

**Georgia** @evansc20: Yes it's really interesting, the perfect mix of physics, biology and medicine for me!

Lots of students wanted to know about planets, including this example below. The scientists were great at being engaging and interesting within chats, explaining topics in accessible ways suitable for the students' level of understanding:

**Yas** @Scott what is the most interesting planet

**Scott @Yas** There are some very interesting planets outside our solar system that we have discovered, like real life water worlds!

**Yas** @Scott: Wow

**Scott @Yas** Venus is also pretty epic because it's a horrible hellish place that can melt lead either through its heat or acid rain... BUT we think we could fly balloons at just the right height in the atmosphere for it to be breathable and kind of ok!

**Yas** @Scott: That's so cool!

## Scientists of the Week

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

The 10 *Scientists of the Week* were **Ry Cutter, Rosanna Tilbrook, Julian Onions, Scott Lawrie, Viktor Doychinov, Rosie Hayward, Dipendra Mistry, Jordan McElwee, Sophia Pells** and **James Smallcombe**. The overall winner of this zone was **Ry Cutter**.





## Feedback from the Physics Zone

*One of the nice aspects of "I'm a Scientist" is the range of ages covered in the chats. You have the off the wall questions asked by year 5's and more career oriented questions from year 10-12's. This has taught me how to better cater my answers to the age range asking the questions and try and communicate tricky concepts to make them accessible. -- Adam, Scientist*

*Thank you so much everyone for all of the replies, this will certainly help me greatly in my future scientific journey -- Student*

*I've enjoyed answering such a wide range of questions. It's been great to see what students are thinking and asking about. It has definitely kept me on my toes especially during live chats. I think I've learnt how to structure my answers better for a wider audience (no more jargon!). -- Ashleigh, Scientist*



Looking forward to our [#physics](#) chat today! We have 5 physicists specialising in particle accelerators, neutrinos, and nuclear physics from around the UK ready to answer questions from our A level students - can't wait!

*thankyou for having us it has been amazing to learn some new things -- Student*

## Feedback from across the Stay at home activity

*Everything was amazing! I was astounded by the questions that the children were asking and about how well the scientists answered their questions. My class were really inspired and have realised what a wide variety of careers use Science. They believe that they can do it too. -- Teacher*

*I'm a Scientist has been a lifeline for me, I'm isolating on my own and it can be really lonely. I have really enjoyed chatting to students and scientists and learning so much! -- Chloe, Scientist*



Ailith Ewing  
@Ailith\_Ewing

I decided to take part in [@imascientist](#) to remind me why I enjoy being a scientist, to remind me what was important about my work and to learn from the enthusiasm of students and other scientists alike. It worked. I am grateful. Highly recommend to scientists at all career stages

1:20 PM · Jul 27, 2020 · [Twitter Web App](#)

*im so happy this was a homework enrichment! :-)* -- Student

*That was the academic highlight of the lockdown so far. It was fast and furious wasn't it? So many students signed up and all engaged. Again a big thank you from me and year 7! -- Head of Year 7, Bournemouth School*

## Feedback from across the Stay at home activity

*Was just as much a benefit for me as for students. Isolated working from home, the chats were just what I needed to lift my spirits and get excited about science! --*  
**Elena Maters, Scientist**



Thank you @imascientist for providing our pupils with the opportunity to talk to scientists today. They thought it was "so cool" and we were very impressed by their questions! 🧠💡👀

1:32 PM · May 27, 2020 · Twitter for iPhone

*Thank you scientists very interesting answers loved this might be a scientist for my job! --*  
**Student**



Lucie Evans ▸ I'm a Scientist, Get me out of here

22 mins · 🌐

Just had the most wonderful 40 minutes of live chat with 9 of your scientists and 22 of my year 8 students. The scientists were superb and the students absolutely loved their chat time. They're scrutinising all the answers now and deciding who to vote for! Thank you so much for running this during lockdown, it's really helped to keep them motivated and engaged.



*I was just so impressed by what I think is a huge effort by all involved to support and inspire young students (many of whom are struggling to keep motivated during these uncertain times). Much thought and care was clearly given to each answer and my students have all contacted me since to say that they had "the best time!" --*  
**Teacher**