















March, 2019

The Time Zone was a themed physics zone supported by the Institute of Physics. In the zone were:

- Zoe Wimshurst, the zone winner, who works with athletes to help them improve their vision, see things more quickly and increase the amount of time they have to make a decision based on their sight.
- Hamid Ohadi, an experimental physicist who works with mirrors and lasers to test new theories.
- Kai Guo, who works with satellites to find the position of objects on the ground.
- Claire Greenwell, a PhD student researching super massive black holes.
- Jose Eliel Camargo Molina, who tests different particle theories and how they link to the collapse of the universe.
- Hannah Collingwood, who works on time issues in various large projects such as the Square Kilometre Array.

Key figures from the Time Zone and the averages of the March zones

PAGE VIEWS	TIME ZONE	MAR '19 ZONES AVERAGE
Total zone	13,314	15,399
ASK page	1,223	1,114
CHAT page	1,373	1,291
VOTE page	1,463	1,327

Popular topics

Students engaged well with the zone theme and the scientists' work.

Zoe working with sports and athletes was a very popular topic in chats and ASK.

Claire's work with black holes was also popular and black holes in general, as well as other space topics.

Questions relating to time were often about how to slow down, speed up or reverse time, but also included things such as "How do black

	TIME ZONE	MAR '19 ZONES AVERAGE	IAS 2012-19 AVERAGE
Time Zone Schools	8	8	10
Students logged in	372	388	391
% of students active in ASK, CHAT or VOTE	83%	92%	86%
Questions asked	462	443	675
Questions approved	208	216	297
Answers given	184	437	532
Comments	14	29	71
Votes	280	312	308
Live chats	19	19	16
Lines of live chat	4,583	6,732	5,711
Average lines per live chat	241	352	358

holes affect time?" and "Why is the British time zone so different to the Americans'?"













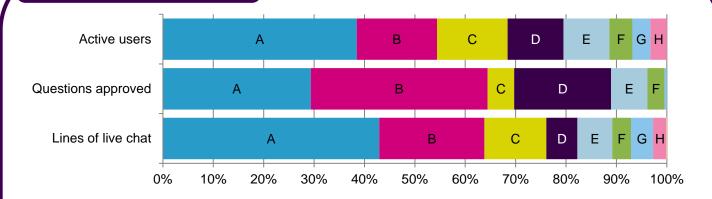






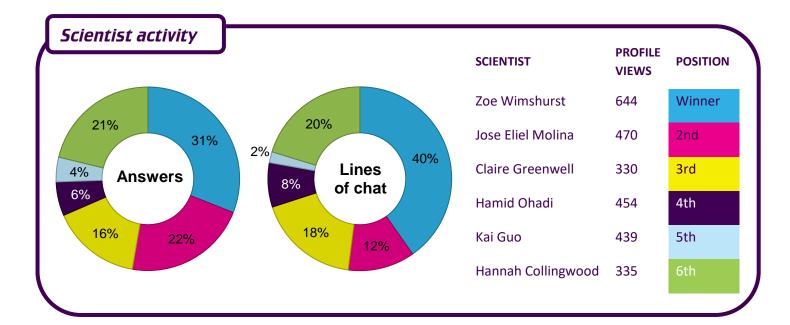






	School	Year/s	Classes
Α	The Deanery Church of England Sixth Form College, Wigan	Y7, Y8	5
В	Darrick Wood School, Orpington	Y10	3
С	Newbattle High School, Midlothian, WP	S1, S2	2
D	St Andrew's High School, North Lanarkshire, WP	S3	2
Е	King Edward VI School, Southampton	Y9	1
F	Smith's Wood Academy, Birmingham, WP	Mixed STEM Club	1
G	Francis Holland School, London	Mixed STEM Club	1
Н	Sheringham High School, Sheringham, U	Y10	1

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/



















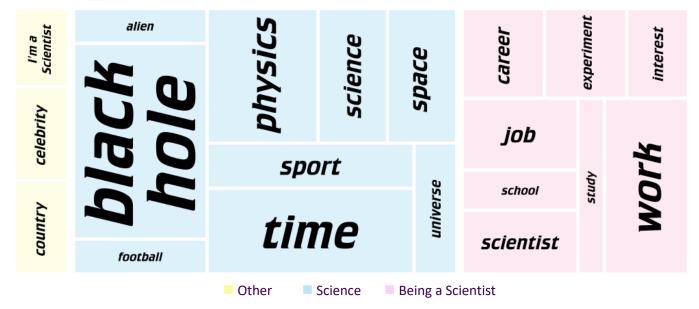






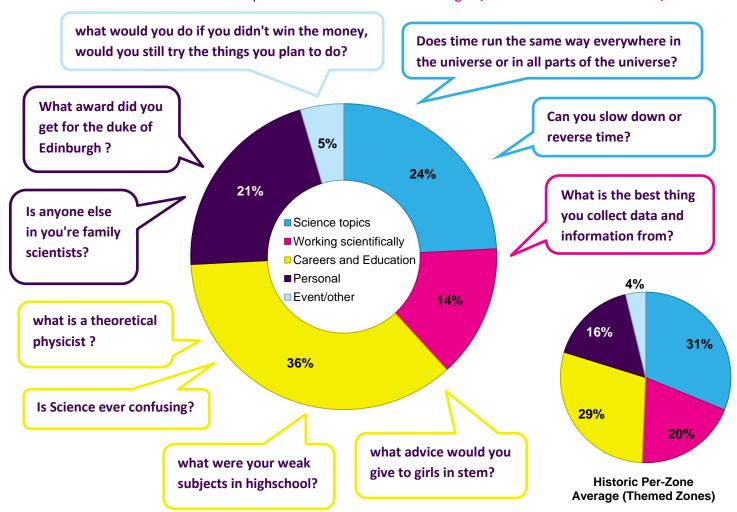
Top Keywords of questions approved in the Zone

Area represents frequency of use



Question themes and example questions in the Zone

Find out about how we've coded the questions at about.imascientist.org.uk/what-do-students-ask-about/















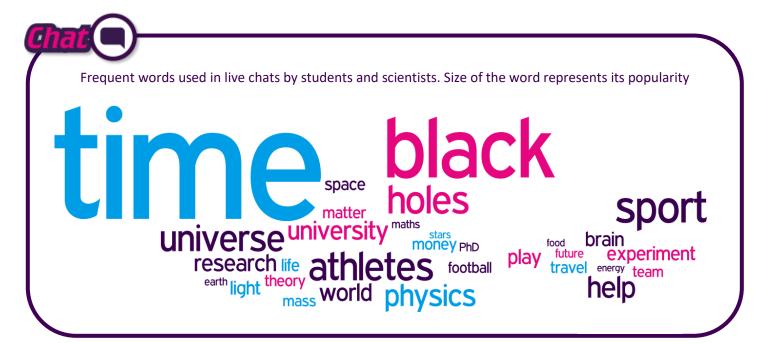












Examples of good engagement

The scientists often gave detailed answers to students but left room for further questions, so the students could direct the conversations to what was most interesting to them. Below, one student was interested to know how Jose Eliel's work affected 'well known theories':

"How do you go about testing your particle theories?" - Student

"The main thing is to compare the theory's prediction to what is measured in experiments. So you try to find things your theory say should happen and then go and look at the data, from for example the LHC. If your theory is right, and what you predicted is there, it is in good shape.

A big part is to explain things we already know! In the case of my research, the experiment I use to check is that we are here:) Some theories might be great at predicting what dark matter is, but at the same time they might tell you that our universe would have collapsed and would be in a different state where physics is completely different." - **Jose Eliel, scientist**

"It sounds very interesting. What sort of well known theories have you been able to explain better thanks to your work?" - **Student**

"There are a set of very popular theories called supersymmetric theories. The simplest one of those is called the Minimal Supersymmetric Standard Model. I've studied that theory and shown that often, even when it predicts cool stuff like what is dark matter or why the Higgs boson has a mass of 125 GeV, it turns out that it also predicts our universe would have decayed." - Jose Eliel, scientist























Scientist winner: Zoe Wimshurst

Zoe's plans for the prize money: "I would like to start a podcast aimed at school students."

Read Zoe's thank you message.

Student winner: sowen

sowen from Sheringham High School was nominated by the scientists for because they 'had clearly looked into scientists profiles before the chat'. As the student winner, sowen will receive a certificate and a gift voucher.

Feedback

We're still collecting feedback from teachers, students and students but here are a few of the comments made about March's *I'm a Scientist* activity...

It was fab! The children were engaged, there was a buzz around the room!
What a pleasure to witness and inspire them! – **Teacher**

[I have learnt] scientists are normal people aswell not just nerds – **Student**

[I have learnt] a lot really about the level I should keep in a conversation to keep interest and how to give students little snippets of info so they do become curious... a crash course in communication really.

And I think I just became passionate about them, who they are what they think, what interests them – **Silvia**, **scientist**

Thank you very much for answering all of our questions. we have learnt a lot today and we really appreciate it because it has truly inspired us to follow our dreams and not worry about all the bumps in the way – **Student**

love the live chats! It gives students the chance to ask anything and they really do! I have grown so much through my participation in this event!

Thank You! – **Scientist**

I sign up every term as it is a great addition to help students engage with science. It also ticks an Ofsted box of helping disadvantaged students to relate what happens in the classroom to the real world. – **Teacher**



