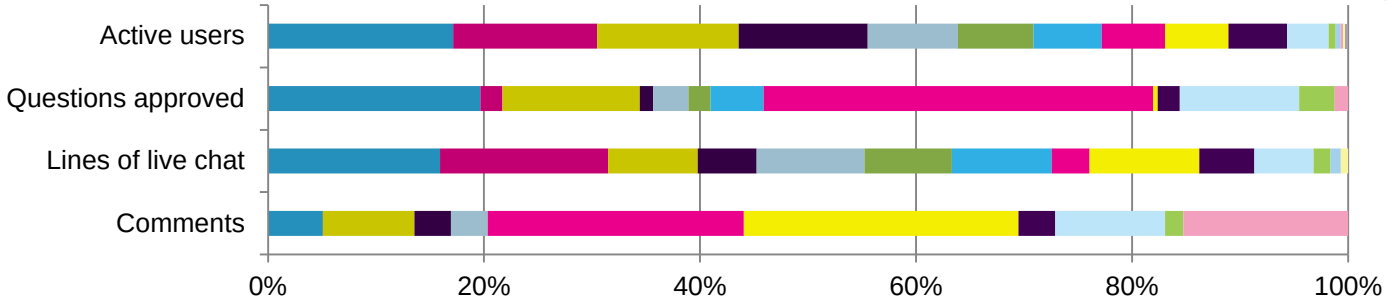
March 2018

The Space Data Zone was funded by the UK Space Agency. Tim, the winner of this zone, is a PhD student investigating waves that happen over and inside the sun, Stephen is using space telescopes to find out how the first stars formed and Sammie is using data from satellites to work out how much sea ice is in the Arctic. Rachel is looking water supply in the environment using information from satellites, Mark is a PhD student studying the most ancient light in the universe and Lisa uses radars, cameras and rockets to find out how the magnetic fields of the Sun and the Earth interact.

Students in this zone engaged really well with the zone theme, with lots of interest in space and the work of the scientists. Lisa took part in the event from where she lives and works in Svalbard, and students were interested in what it was like to live there.

School data at a glance



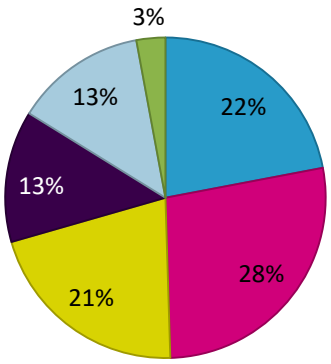
- Simon Balle All-Through School (U)
- Smithdon High School (U)
- Reepham High School and College (U)
- Barry Primary School (U)
- St Peter and Paul Catholic Primary School (U)
- Grewelthorpe Church of England Primary School (U)
- Sullivan Upper School *
- Somervale School Specialist Media Arts College (U) *
- Sir John Thursby Community College (WP/U)
- Upton Junior School (WP/U)
- Hammersmith Academy (WP)
- Kingsmead Academy (U)
- Hylands School (WP/U)
- Willows High School *
- Whitgreave Junior School (WP) *
- Llanyrafon Primary School (U) *

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/**

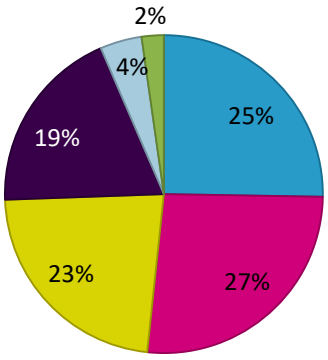
* Students were able to join other zones than their own to join open live chats and ASK questions. Students at these schools joined from other zones in the March event.

Scientist activity

Answers



Lines of chat



SCIENTIST	PROFILE VIEWS	POSITION
Tim Duckenfield	1,126	Winner
Sammie Buzzard	905	2nd
Lisa Baddeley	1,026	3rd
Mark Mirmelstein	840	4th
Stephen Wilkins	830	5th
Rachel Dewhurst	657	6th

Key figures from the Space Data Zone and the averages of the March zones

PAGE VIEWS	SPACE DATA ZONE	MAR '18 ZONES AVERAGE
Total zone	20,278	19,571
ASK page	1,455	1,625
CHAT page	2,034	1,691
VOTE page	1,911	1,422

	SPACE DATA ZONE	MAR '18 ZONES AVERAGE	IAS 2012-18 AVERAGE
Schools	16	14	11
Students logged in	467	437	387
% of students active in ASK, CHAT or VOTE	95%	89%	86%
Questions asked	382	529	697
Questions approved	233	258	303
Answers given	309	469	541
Comments	56	62	75
Votes	374	348	304
Live chats	21	19	16
Lines of live chat	7,620	7,268	5,472
Average lines per live chat	363	388	354

Popular topics

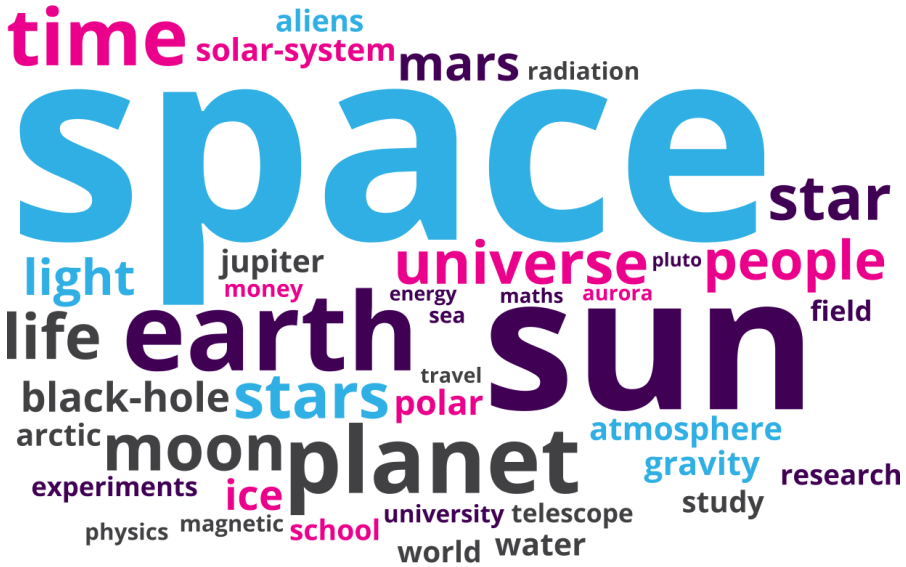
The majority of conversations in both ASK and the live chats were on topic about space and astronomy. The students engaged well with the scientists' individual work areas, such as Tim receiving questions on his work to do with the sun and Lisa on the aurora borealis. Sammie was asked how she measures the amount of sea ice in the Arctic. Students showed a good awareness of issues to do with climate change and also asked her how long it will be until the ice completely melts, and whether it can be stopped. Mark and Stephen were asked about stars and how they form, as well as about the big bang and what existed before the universe was formed. There were lots of general space questions, with students wanting to know all about black holes, the moon and space travel.

Students also wanted to know what it was like being a scientist, asking about salaries, experiments and the parts of their jobs they find the most challenging.

There were some thoughtful questions about religion and science, and personal questions for the scientists about where they grew up and where they have travelled.

Chat

Keywords from live chats in the zone, size of the word represents its popularity

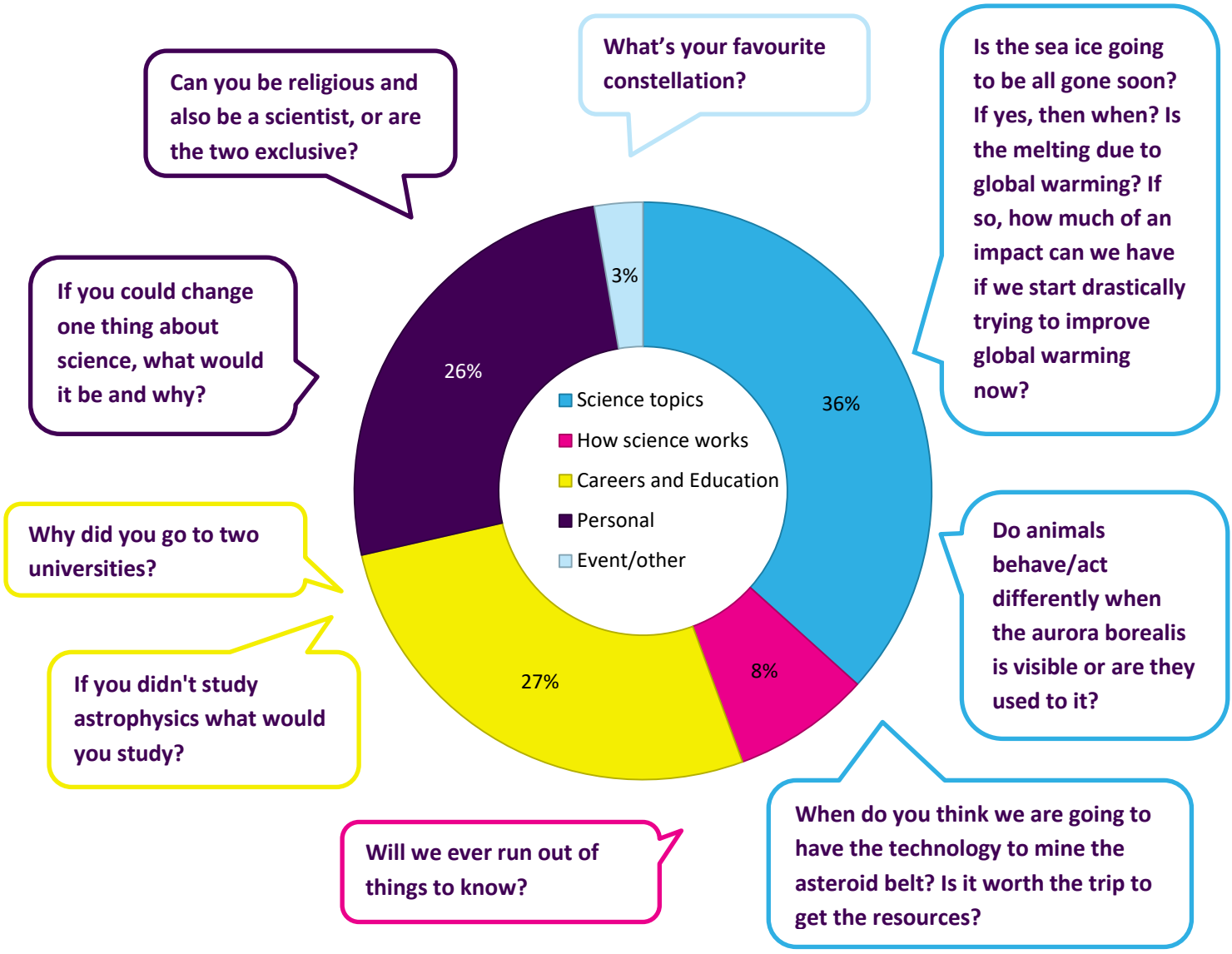


Ask ?

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/2017/student-question-coding**

Examples of good engagement

Students engaged really well with the zone theme, with lots of conversations about space travel and life on other planets.

> *"how far do you think we could get into our solar system by 3000?"* ***– Student***
>
> *"We've sent robots pretty much across the solar system. I imagine in 1000 years we would have the capability for humans to travel everywhere in the solar system."* ***– Stephen, scientist***
>
> *"I really hope by 3000 we have left this solar system...if you think how far we have come since the 1100s"* ***– Lisa, scientist***
>
> *"Thanks a lot. Do you think aliens exist?"* ***– Student***

"Probably, but I don't think they've visited us!" ***– Stephen, scientist***

The scientists were very open with students about topics like religion, such as in **this ASK question about whether scientists can believe in God**.

"Can you be religious and also be a scientist, or are the two exclusive?" ***– Student***

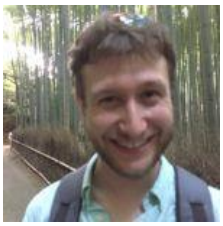
"There is absolutely no problem with being religious and being a scientist, and in some cases works as a good motivator! Religion asks different questions than science, it questions the intangible and the ethical – science might say what we CAN do, but religious opinion is important in saying what we SHOULD do. The problem happens when people choose to ignore evidence that contradicts their beliefs – this is very unscientific!" ***– Tim, scientist***

"It can be very tough for people if things like ice cores or fossils (as Tim says) contradict what they have grown up believing, but most scientists I know cope just fine and the scientific evidence comes first. Many are of the opinion that if you're working in climate science then we're trying to help the planet so that fits in very well with their beliefs and can motivate them to keep going!" ***– Sammie, scientist***

"Is it true lots of scientists don't believe in god?" ***– Student***

"Lots don't but lots do too, we get all types of people doing science which I think makes it even more interesting ☺Makes for lots of good coffee break conversations." ***– Sammie, scientist***

Scientist winner: Tim Duckenfield



Tim's plans for the prize money: "*Our department (CFSA) engages a lot with local STEM outreach, and I have helped give talks at local schools, let them play with our H-alpha telescopes, run solar-based activities, spoken at careers events etc a lot over the last few years. We would use this money to continue traveling to other schools, pay for newer and bigger experiments that show off physics, and generally help the fund our researchers use to enable this outreach.*" Read Tim's **thank you message.**

Student winner: Ruben

For great engagement during the event, this student will receive a gift voucher and a certificate.

Feedback

We're still collecting feedback from teachers, students and scientists but here are a few of the comments made during the event…

"[I'm a Scientist] was really good this year. Having space scientists meant all the students were extra engaged." **– Teacher**

"I think the students were surprised at the freedom of this format, and this made the engagement fun. Whenever a scientist answered their question directly, they were thrilled and it helped make the whole activity seem it will have more impact than other outreach." **– Tim, scientist**