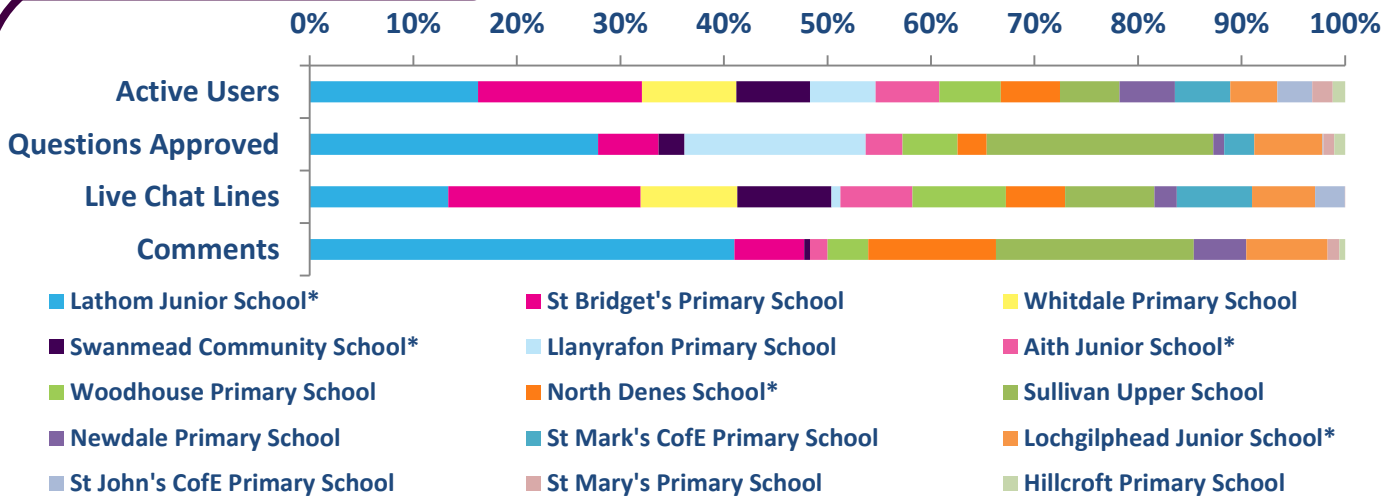
November 2016

The Radon Zone as a general zone specifically for Primary schools and was funded by Wellcome. Réka (the winner of this zone) studies genetics to find out how our DNA makes us look like our relatives, Pip is a paediatrics doctor and Kuntal is studying how climate change will affect crop growth to improve ways of growing rice. Kate is a medical physicist who uses x-rays to treat cancer and Ajay studies how skin changes throughout our life in order to learn more about diseases like skin cancer.

The Radon Zone was extremely busy, with over 3,000 questions asked – the most out of all the zones in this event and over four times the historic average. In the ASK section, the scientists provided an extremely high number of answers (777), and students left a much higher than average number of comments in reply (191). Réka made up over half of all scientist activity in both ASK and the live chats, and attended every chat session.

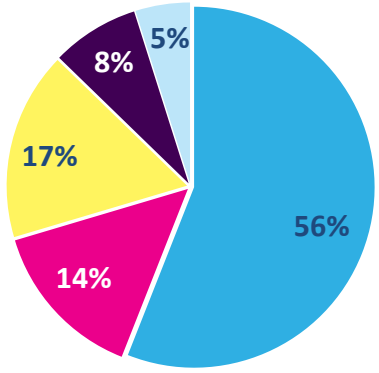
School data at a glance



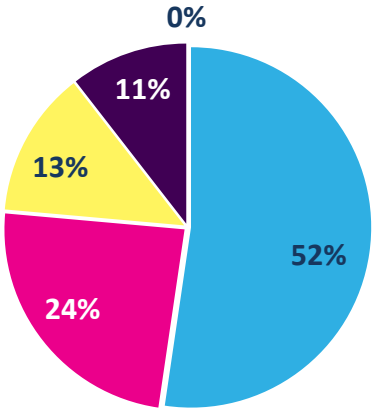
* Widening participation schools, as defined at http://about.imascientist.org.uk/2016/widening-participation-2016

Scientist activity

Answers



Lines of Live Chat



Scientist	Profile views	Position
Réka Nagy	1,576	Winner
Pip Millington	1,481	2nd
Kate Elliot	1,014	3rd
Kuntal Singh	939	4th
Ajay Mishra	832	5th

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Key figures from the Radon Zone and the averages of the November zones

PAGE VIEWS	RADON ZONE	NOV '16 ZONES AVERAGE
Total zone	38,577	28,763
ASK page	7,255	2,580
CHAT page	3,294	3,035
VOTE page	2,914	2,124

	RADON ZONE	NOV '16 ZONES AVERAGE	IAS 2012-16 AVERAGE
Schools	15	15	10
Students logged in	602	512	372
% of students active in ASK, CHAT or VOTE	84%	87%	85%
Questions asked	3,172	961	718
Questions approved	959	408	309
Answers given	777	520	553
Comments	191	72	78
Votes	575	413	295
Live chats	22	19	15
Lines of live chat	8,921	5,474	5,202
Average lines per live chat	406	400	343

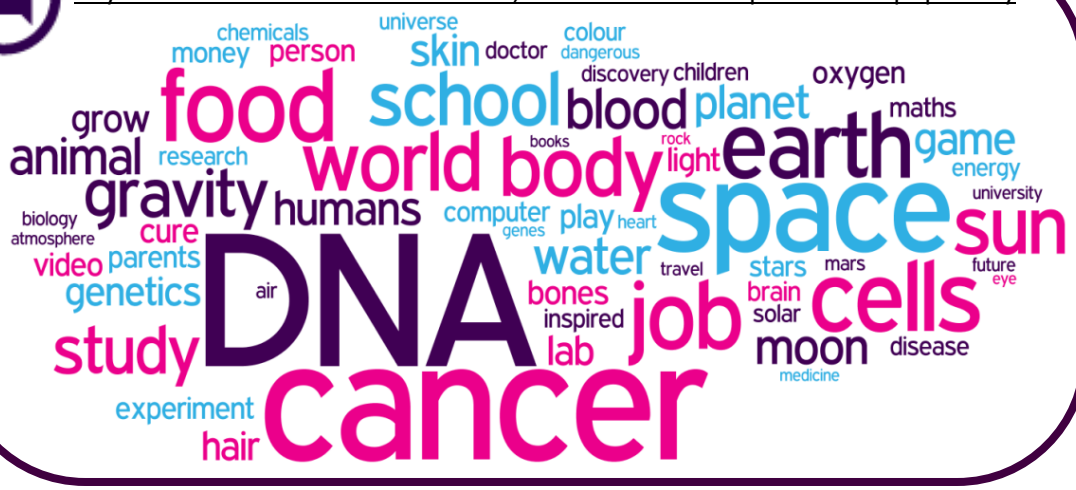
Popular topics

Students in the zone were really receptive to the scientists' research areas, and asked lots of questions in order to understand what the scientists all did. For example, Réka was asked about what DNA is, whether you can see it, and what she has found out about why we look the way we do. There was a lot of interest in how Kate treats cancer, and more general questions about cancer too. Pip was asked about his experiences working with children and then more general questions about the human body and illness. Kuntal and Ajay's research was a bit more complicated for the students to understand, but engaged with the students by answering more general questions about science and being a scientist.

The huge amount of questions in ASK meant there was a massive variety in questions. Lots of students asked 'why' questions about the world around them ranging from why do our teeth fall out, to why can't all birds fly, to why do leaves change colour. Even though none of the scientists were physicists, a huge amount of questions were about space. Students were interested in topics like the sun and moon, satellites, our solar system and whether animals had been to space.

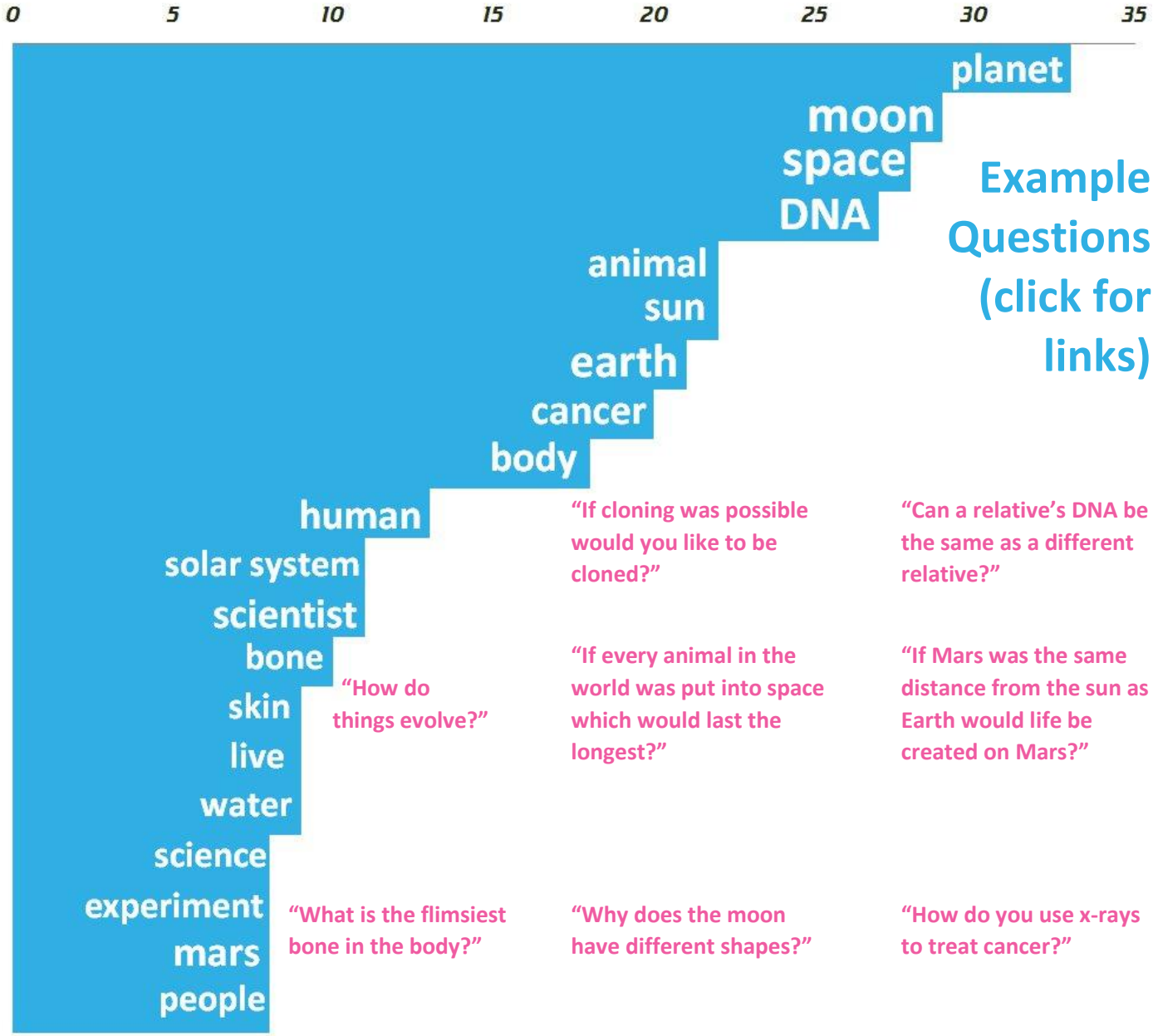
Chat

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



Ask ?

Keywords of questions approved in the zone, length of bar represents frequency of use



Example Questions (click for links)

"If cloning was possible would you like to be cloned?"

"Can a relative's DNA be the same as a different relative?"

"How do things evolve?"

"If every animal in the world was put into space which would last the longest?"

"If Mars was the same distance from the sun as Earth would life be created on Mars?"

"What is the flimsiest bone in the body?"

"Why does the moon have different shapes?"

"How do you use x-rays to treat cancer?"

"What is the main way DNA molecules mutate?"

"What are the signs to show you might have cancer?"

"How many blood cells are in one drop of an animal's blood?"

"Why does our skin react to the sun and get burnt? And if so how does sun cream protect us?"

"What is the main way DNA molecules mutate?"

"Why can't we breathe in space?"

"How many genes are in the human body?"

"Can you see DNA?"

Examples of good engagement

Réka's work with DNA prompted a lot of interesting questions about mutations and she was great at interacting with the students in a fun and accessible way.

> *"If you could mutate into another form what would it be?"* – **Student**

> *"Darn, my usual answer to the 'what superpower would you want to have' question is that I would become a shape-shifter, and now you're limiting me to pick only one thing! Not fair. If I'm not limited to having to pick an animal, I would probably pick a human form that is able to fly, breathe underwater and run really fast. Kind of like a flying cheetah-fish. But still looking human. What about you?"* – **Réka, scientist**

> *"An owl with X-ray vision which can swim or a dolphin with wings!"* – **Student**

Students were interested in the scientists' lives and often bonded over discussing their favourite animals and pets.

> *"What do they call days on Mars?"* – **Student**

> *"We call it days. Perhaps you could ask your class what they think Martians would call it?"* – **Pip, scientist**

> *"We think they should we called beebops!"*– **Student**

> *"A beebop on Mars is about 40 minutes longer than a day on Earth!"*– **Pip, scientist**

Scientist winner: Réka Nagy

Réka's plans for the prize money: *"I would create a science-themed board or card game. My institute does a lot of outreach and communication activities throughout the year. We are constantly developing new activities to suit the topics we are trying to discuss, so there is always need for new resources. I would spend the prize money on turning an aspect of genetics into a card or board game."* Read Réka's **thank you message.**

Student winner: Indominus Rex

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 wish i could stay here for ever because this is awesome:(but at least I am here just now:) I have learnt a lot" – **Student**

"Our students absolutely loved it as did I – and I believe some were eager to get logged back onto the live chat even after they had gone home!...We have just had parents evening and it was highlighted by parents as something their children were very engaged in and thoroughly enjoyed." – **Teacher**

"This is mind blowing!" – **Student**