

November 2019

The Sodium Zone was a general zone supported by Science Foundation Ireland, with five scientists who work in a variety of areas:

- Souvik Kundu, the winner of this zone, is a research student working with VR and haptics to create robots with real-world applications in healthcare and cars.
- Sabine Giron works with factory workers to develop robots that can help solve their problems in the work environment
- Maria McNamara is a paleobiologist studying preserved colours and biochemicals in fossils.
- John Butler is a neuroscience researcher building mathematical models to help understand how our brains work when we walk.
- Armin Shams is a research fellow trying to build smart and sustainable cities through digital transformation.

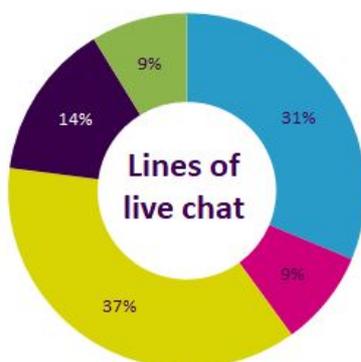
Key figures

This was one of the busier zones this November, with a higher than average number of students logged in and questions asked.

At short notice, a sixth scientist in this zone was unable to take part over the two weeks, meaning five scientists were active in chats and in ASK.

| | SODIUM ZONE | NOV '19 ZONES AVERAGE | 2012-19 ZONES AVERAGE |
|--|-------------|-----------------------|-----------------------|
| Schools | 11 | 11 | 11 |
| Students logged in | 385 | 367 | 372 |
| % of students active in ASK, CHAT, VOTE, or comments | 90% | 87% | 86% |
| Questions asked | 893 | 851 | 692 |
| Questions approved | 413 | 384 | 303 |
| Answers given | 450 | 529 | 511 |
| Comments | 64 | 69 | 67 |
| Votes | 266 | 281 | 304 |
| Live chats | 15 | 17 | 16 |
| Lines of live chat | 4963 | 5092 | 4359 |
| Average lines per chat | 331 | 293 | 271 |

Scientist activity



SCIENTISTS

PLACE

Souvik Kundu

1st

Armin Shams

2nd

Sabine Giron

3rd

Maria McNamara

4th

John Butler

5th



Souvik



Sabine Giron



Maria

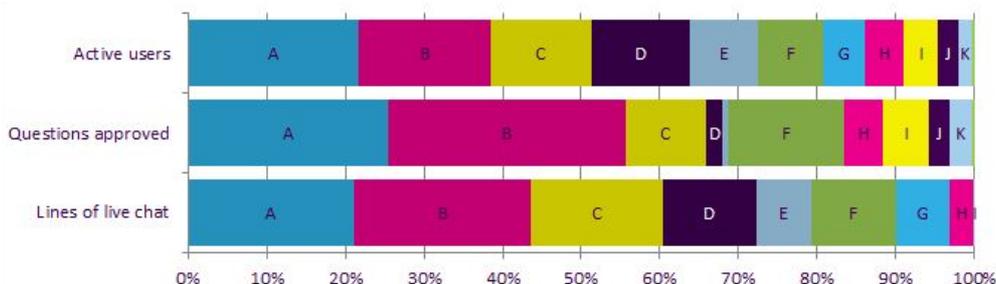


John



Armin

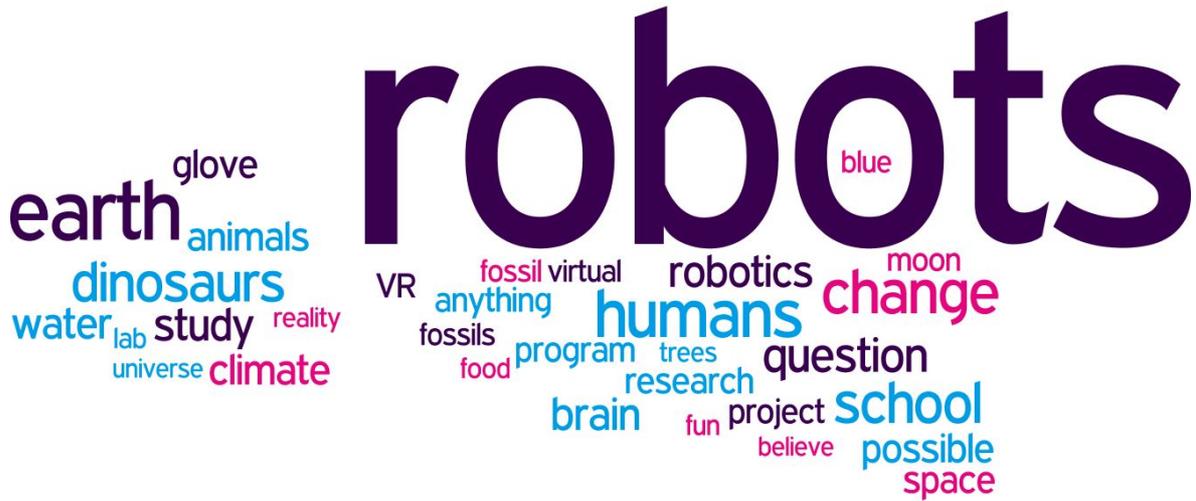
School activity



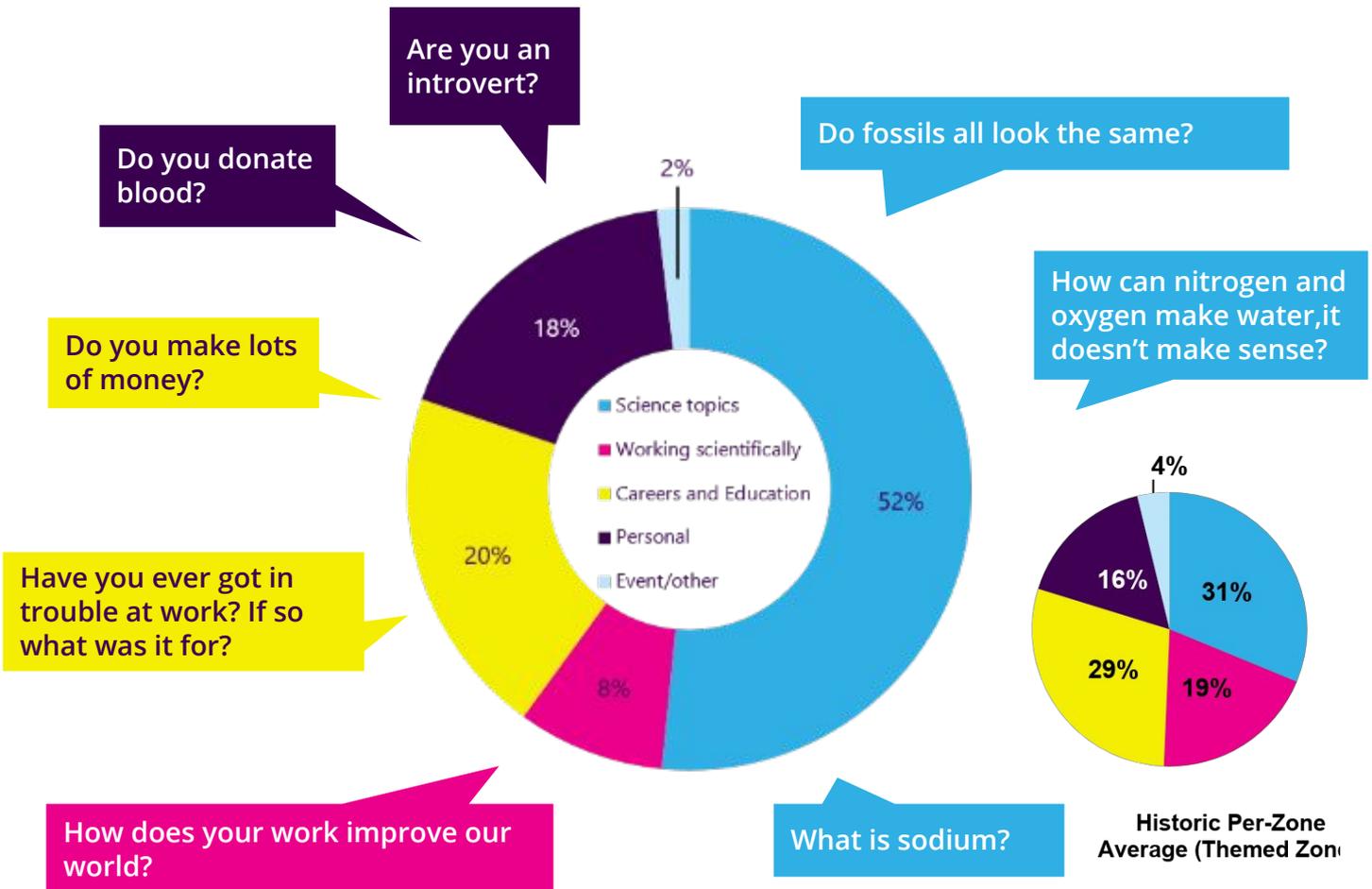
| | YEAR GROUP(S) | CLASSES |
|--|-----------------|---------|
| A Adamstown Community College, Dublin (U) | 2nd Year | 2 |
| B St Colmans Clara NS, Kilkenny | 5th, 6th Class | 2 |
| C Community School, Kilkenny | 1st Year | 2 |
| D Malahide Community School, Dublin (U) | 2nd Year | 2 |
| E Ardgillan Community College, Dublin (U) | 2nd Year | 1 |
| F North Dublin Ns Project, Dublin (U) | 5th, 6th Class | 2 |
| G Eureka Secondary School, Meath (U) | Transition Year | 2 |
| H S N Naomh Feichin, Co Mayo | 5th Class | 1 |
| I Dún An Rí College, Cavan (U) | 1st Year | 2 |
| J Inver College, Monaghan (DEIS/U) | 1st Year | 1 |
| K Patrickswell NS, Limerick | 6th Class | 1 |
| L Loreto Secondary School, Donegal (DEIS/U) | 2nd, 1st Year | 2 |

We try to reach schools that are less likely to receive visits and benefit from other engagement activities. Find out what we mean by under-served SFI target schools (U) and Delivering Equality of Opportunity in Schools (DEIS), and how you can support us in working with these at about.imascientist.ie/2016/widening-participation

Frequent words used in live chats by students and scientists



Question analysis



Examples of good engagement

Students were interested in the individual projects the scientists were working on, such as Souvik's research into VR and the applications of his robot within the real world:

"Souvik, doctors get assistants and nurses, would the glove get a glove assistant or nurse as well?"
- **Student**

"The glove is an assistant of human beings who will control the robot, or will help in operating in VR or AR" - **Souvik, Scientist**

"But in a surgery, like say, a doctor was in America and was doing an operation in Ireland, would the glove get an assistant in Ireland?" - **Student**

"Yes, teleoperation is possible...but it's in the research stage. We still need time to actually implement it." - **Souvik, Scientist**

"There is research on using controlled-robotics to do that. One of the main challenges is the time it takes for the information to go from America to Ireland! Even a millisecond of delay can have a huge impact." - **Sabine, Scientist**

"I am loving this, I love finding out new things." - **Student**

Many students took the opportunity to ask for more information on things they had heard about, asking the scientists for their opinions on controversial topics such as cloning:

"I heard that sheep and pets have been cloned or that they found out how to at least, something like that, are you going to try to clone humans? would they still have the same personality and act the same? would you ever do that?"

- **Student**

"I don't think cloning of humans is ethical. Despite initially similar DNA the clone would have different life experiences and these would translate into a different personality. It probably is technically possible to do this but it is not permitted." - **Maria, Scientist**

"I saw it in this really messed up movie I am very happy that it is not allowed to be done and thank you for answering my question." - **Student**



Souvik



Sabine Giron



Maria



John



Armin



Scientist winner: Souvik Kundu

Souvik's plans for the prize money: *"I will arrange workshops with small children who can come to my institute and see the research institute and talk with many scientists. I want to buy many colours and do workshop with them. I think if you are creative in art or any other form you can create new things in science also. At the end of the day we all are finding or creating new."*

Read Souvik's **thank you message**

Student winner: jessica109

As the student winner, jessica109 will receive a certificate and a gift voucher.

Feedback

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

I think it will have made a difference in smashing the stereotypes of scientists and, in doing so, will make science more accessible. I love the fact the students can ask whatever they want too. The caliber of scientists that took part was incredible! Everyone in my zone had amazing communication skills and it was great to see how into it everyone got!

— Scientist

[We took part] for the first time this year. The students THOROUGHLY enjoyed it and wanted me to thank the organisers of such a successful event. It was extremely easy from the teachers point of view and during our live chats yesterday and today, the students were so amazed at getting their answers back immediately. It was great fun!

Many thanks and we look forward to joining up again next year!

— Teacher

[The students] have really enjoyed their time on I'm a Scientist and are spending their Friday afternoon making posters about all they have learned. They now LOVE science!!! They are still interested in so many answers coming their way!

— Teacher



John Butler
@jsibutler

Had a great first day trying to answer curious, fun and insightful questions from primary and secondary school students for @imascientist . My favourite so far was "Since we don't see air, do fish see water?"
#ScienceWeek2019 @scienceirel

6:06 PM · Nov 13, 2019 · Twitter Web App

thank you for coming on and answering lots of questions! i've enjoyed taking part in i'm a scientist get me out of here! thank you very much :)

— Student