

November 2021

The Sustainability Zone (<https://sustainability21.imascientist.ie/>) ran from 8 November to 3 December 2021 and was funded by **Science Foundation Ireland**.

The Zone featured scientists from across the Republic of Ireland, working towards a more sustainable future.

Throughout November, Covid-19 cases in schools reached an all time high. This meant there was less activity within the Zone than expected.

Key figures

	Zone	November 2021 average
Schools	7	13
Students logged in	204	404
Students active	94%	87%
Scientists	16	24
Questions asked	71	178
Questions approved	58	131
Answers given	89	239
Scientist comments	2	24
Live chats	13	21
Lines of live chat	2,792	5,526
Average lines per live chat	215	250
Votes cast	111	223

Scientists

34 scientists were invited to take part in the Zone, of whom 16 created a profile.

You can see who took part at

<https://sustainability21.imascientist.ie/scientists/>

The winning scientist with the most votes from students was **Min Yap**, PhD student with Teagasc and University College Cork.

Students

204 students from 7 schools across the Republic of Ireland logged into the Zone.

94% of students were active within the Zone by participating in live chats, asking questions and voting.

Live chats

13 live chats took place during the activity, which were for school classes booked by teachers.

An additional 11 live chats were booked and cancelled or the school was unable to attend without cancelling.

It is common for students to share login details or computers during live chats. Therefore, the number of students reached will be higher.

Funded by:

School activity

Students from 7 schools across the Republic of Ireland participated in the Zone. In addition to live chats booked by teachers, there was one Friday afternoon chat scheduled for the students and their families.

School	DEIS status	Active users	Chats attended	Chat lines (total)	Average Chat lines (per user)	Questions approved	Votes
Drumshanbo Vocational School, Leitrim	U	61	4	275	5	21	16
Sacred Heart Secondary School, Cork ¹	-	34	2	281	8	1	6
KILTERNAN N S 1, Dublin	U	32	3	494	15	9	30
Davitt College, Mayo	DEIS	31	2	245	8	0	29
S N MHUIRE, Meath	DEIS	18	1	206	11	1	17
St Killian's College (Choláiste Chilleáin Naofa), Galway	-	18	2	55	3	4	12
Rosmini Community School, Dublin	DEIS	3	0	0	0	22	0

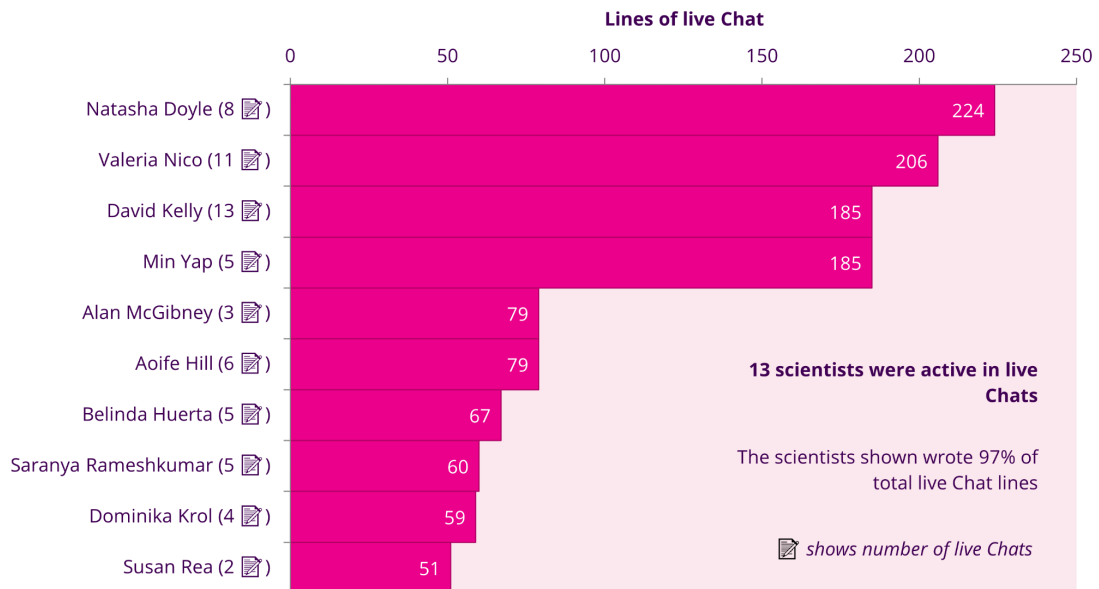
We want to increase the participation of under-represented groups. Find out what we mean by under-served (U) and DEIS (Delivering Equality of Opportunity in Schools) schools, and how you can support us in working with more of these: about.imascientist.ie/under-served-and-wp/

¹ Two classes took part from this school.

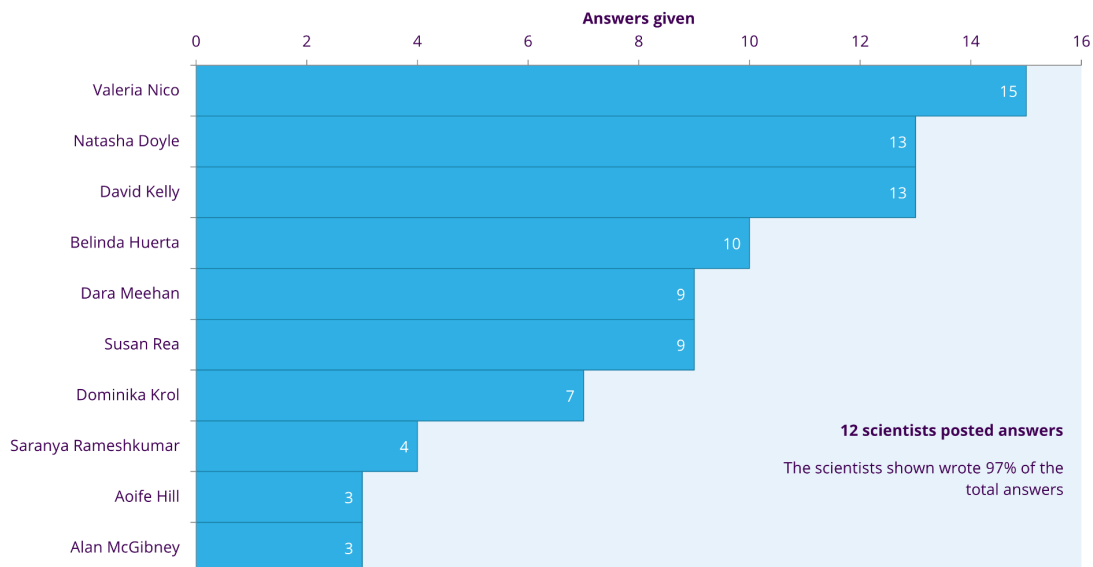
Scientist activity

During the Zone the scientists interacted with students by writing 1,236 lines of live chat, and providing 89 answers to 58 posted questions. On average, 4 scientists attended each live chat.

10 most active scientists in live Chats



10 most active scientists in posting answers



Good engagement

Subject specific questions can help generate interest and knowledge about the scientific field.

Student 1: What are bioplastics?

Belinda (scientist): *Bioplastics are plastic materials produced from renewable biomass sources, such as vegetable fats and oils, corn starch, straw, woodchip, sawdust, recycled food waste, etc.*

Saranya (scientist): *Bioplastics are the ones made from bio-based renewable resources. It is designed from bio or waste resources and made to be degraded or composted faster than conventional plastics*

Student 1: Would the new products you're developing mean a more durable plastic or creating a new material all together?

Aoife (scientist): *My focus is actually biomedical applications. So instead of using long-lasting materials that can cause complications, these temporary plastics can be used instead.*

Student 1: Would these temporary plastics break down sustainably and if so how would that work?

Aoife (scientist): *Poly (lactic acid) is most widely used in this area. It breaks down provided it is exposed to the correct conditions (temperature, water, etc.). It can be created from non-renewable resources, which would be unsustainable, or plants.*

In industrial composting conditions, PLA can break down in 12 weeks. But if it never makes it there, it lasts for years.

While the material exists and is safe for human use, sometimes it doesn't last long enough or lasts too long. My research tries to find out how to control this behaviour.

Information on the scientists careers can provide insight into how variable careers can be and what students may need to do to get there.

Student 1: Why did you want to be a scientist?

Susan (scientist): *I always liked physics and maths and problem solving so science was a good option*

Teacher: Can you become better at problem solving if you practise?

Susan (scientist): *Yes, looking at different problems give you a broader and better perspective while also allowing you to learn from different experiences*

Student 1: What are the main characteristics about being a scientist?

Susan (scientist): *You need to ask questions and be able to look at problems from many different angles to work immediately*

Saranya (scientist): *I would say curiosity, little patience and working on details*

Valeria (scientist): *Curiosity and perseverance! At times things do not work immediately*

Connecting with scientists over shared interest and learning that they are “regular people” can help students relate to them. This makes it easier for students to see themselves in science-related careers.

Student 1: Do you support any football teams?

Alan (scientist): *Arsenal would be my team, have gone to see them play a couple of times. I play fantasy football so I watch all teams...not doing well this year though*

Student 1: Okay, that's cool but I like Man United

Alan (scientist): *They are under a bit of pressure. Is Ronaldo your fav player??*

Student 1: I like Ronaldo but I love David GEA and Luke Shaw

Being able to see how science is relevant to everyday life and how certain knowledge or science can be utilised is an important part of Science Capital.

Student 1: Since global warming is affecting the polar bears, how can we help them to not go extinct?

Alan (scientist): *That's certainly not an easy fix but some tangible things we can do is to try and be more energy efficient in our homes, workplaces and schools, anything that can reduce carbon emissions that is causing rise in temperatures*

Saranya (scientist): *Endangered species like polar bears can be protected by reducing the carbon emissions, use renewable energy to replace emissions and reduce the overall temperature in the arctic region.*

Scientist of the Week

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

The Scientists of the second Week was:



- **David Kelly**, Post-Doctoral Researcher at VistaMilk SFI Research Centre

Scientist Winner

The first scientist of the week was also the overall winner, with the most votes at the end of the Zone was:

- **Min Yap**, PhD student with the Agriculture and Food Development Authority and the University College Cork

As Zone winner, they receive 500€ to spend on further public engagement projects.



"I definitely recommend participating in I'm a Scientist, for both scientists and schools. It's been such an enriching experience and I hope through this, a new generation of scientists will rise up and inspire future generations."

You can read their full statement at

<https://sustainability21.imascientist.ie/2022/01/20/a-thank-you-from-your-winner-min/>

Feedback

Thank you for all the amazing answers, I've had great day

Student

Really enjoying the chats so far - so much enthusiastic engagement

Aoife (scientist)



David Kelly

@david_kelly_1

Delighted to be taking part in the @scienceirel funded @imascientist this week as part of #ScienceWeek2021. Excellent way to engage with the future bright minds of #STEM @teagasc @VistaMilk sustainability21.imascientist.ie

9:48am · 10 Nov 2021 · Twitter Web App

Thank you to the scientists for taking time out of their busy schedule to come and chat with us. We really appreciate the effort and I think the guys here learned a lot. Excellent idea to get students thinking about science after school.

Teacher