



Silvia



Scott



Oliver



Natalie



Michelle



Lowri



March, 2019

The Water Zone was a themed zone supported by Wellcome. In the zone were six scientists:

- Silvia Imberti, who use neutrons to look at hydrogen bonds in liquids.
- Scott Graham, who is currently working as a microbiologist in an animal disease laboratory following a role with Scottish Water.
- Oliver Andrews, a lecturer who uses computers to investigate how global warming changes the oceans and marine life.
- Natalie Lamb, a PhD scientist researching how to treat drinking water better.
- Michelle Valkanas, who studies bioremediation and how can we use biological organisms to clean up the environment.
- Lowri Evans, the winner of the zone, is a marine biologist interested in fisheries and Marine Protected Areas.

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

PAGE VIEWS	WATER ZONE	MAR '19 ZONES AVERAGE
Total zone	12,639	15,399
ASK page	960	1,114
CHAT page	1,236	1,291
VOTE page	1,377	1,327

	WATER ZONE	MAR '19 ZONES AVERAGE	IAS 2012-19 AVERAGE
Water Zone Schools	6	8	10
Students logged in	350	388	391
% of students active in ASK, CHAT or VOTE	95%	92%	86%
Questions asked	362	443	675
Questions approved	195	216	297
Answers given	403	437	532
Comments	8	29	71
Votes	314	312	308
Live chats	13	19	16
Lines of live chat	5,814	6,732	5,711
Average lines per live chat	447	352	358

Popular topics

Students' questions were very on topic in the Water Zone, with lots of interest in marine biology, fish and animals, the environment and climate change. Students were keen to know what is being done by scientists to help our future, and what they could do themselves.

Students were also interested in the scientists' career paths, and what it is like to be a scientist. They wanted to know about projects that the scientists worked on, but also about their lives outside of work. For example, they wanted to know why Lowri is vegan, or if the scientists played video games.



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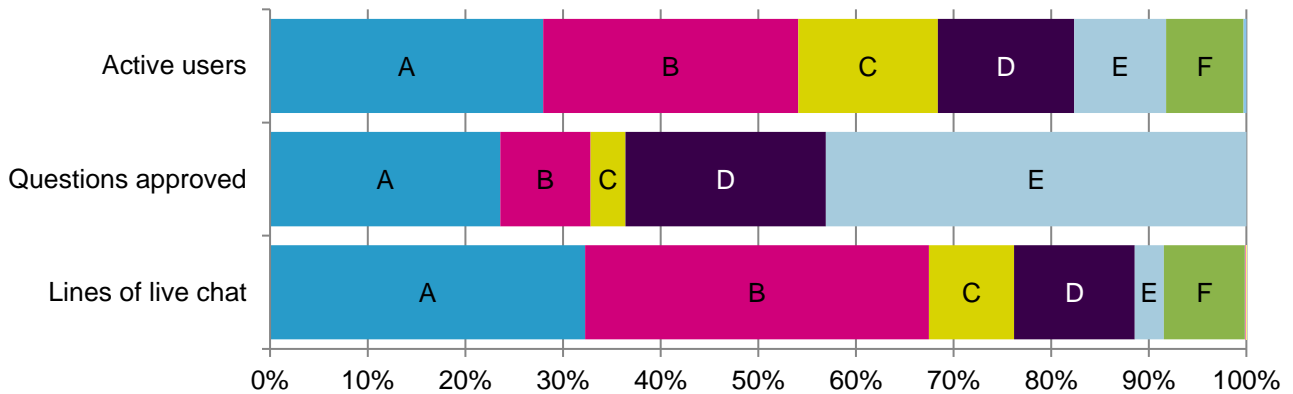


Michelle



Lowri

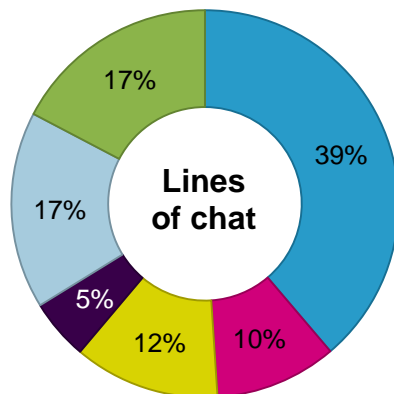
School data at a glance



School	Year/s	Classes
A	St Dominic's High School, Belfast, WP	Y11(NI) 3
B	Gable Hall School, Stanford-le-Hope, U	Y8 3
C	Dinglewell Junior School, Gloucester, U	Y4 2
D	High Storrs School, Sheffield	Y10 1
E	Chatham Grammar School for Girls, Chatham, U	Y9 2
F	Fitzharrys School, Abingdon	Y7 1
G	Aith Junior High School, Shetland Islands, U	P6 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/

Scientist activity

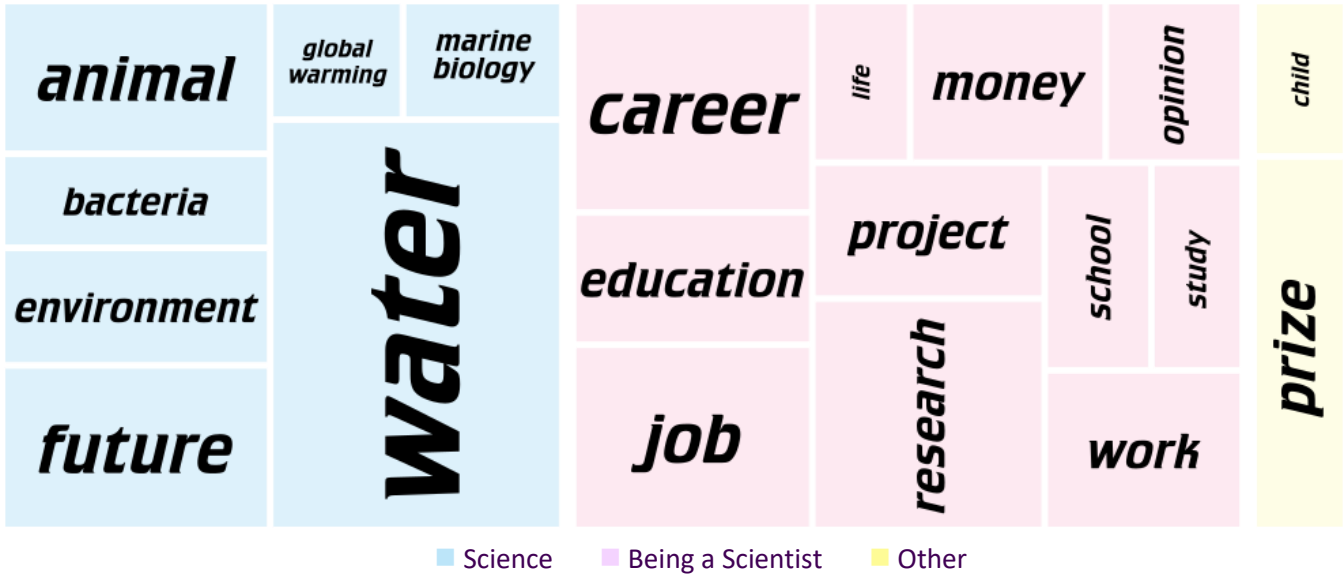


SCIENTIST	PROFILE VIEWS	POSITION
Lowri Evans	422	Winner
Michelle Valkanas	366	2nd
Oliver Andrews	330	3rd
Scott Graham	366	4th
Natalie Lamb	295	5th
Silvia Imberti	385	6th

Ask?

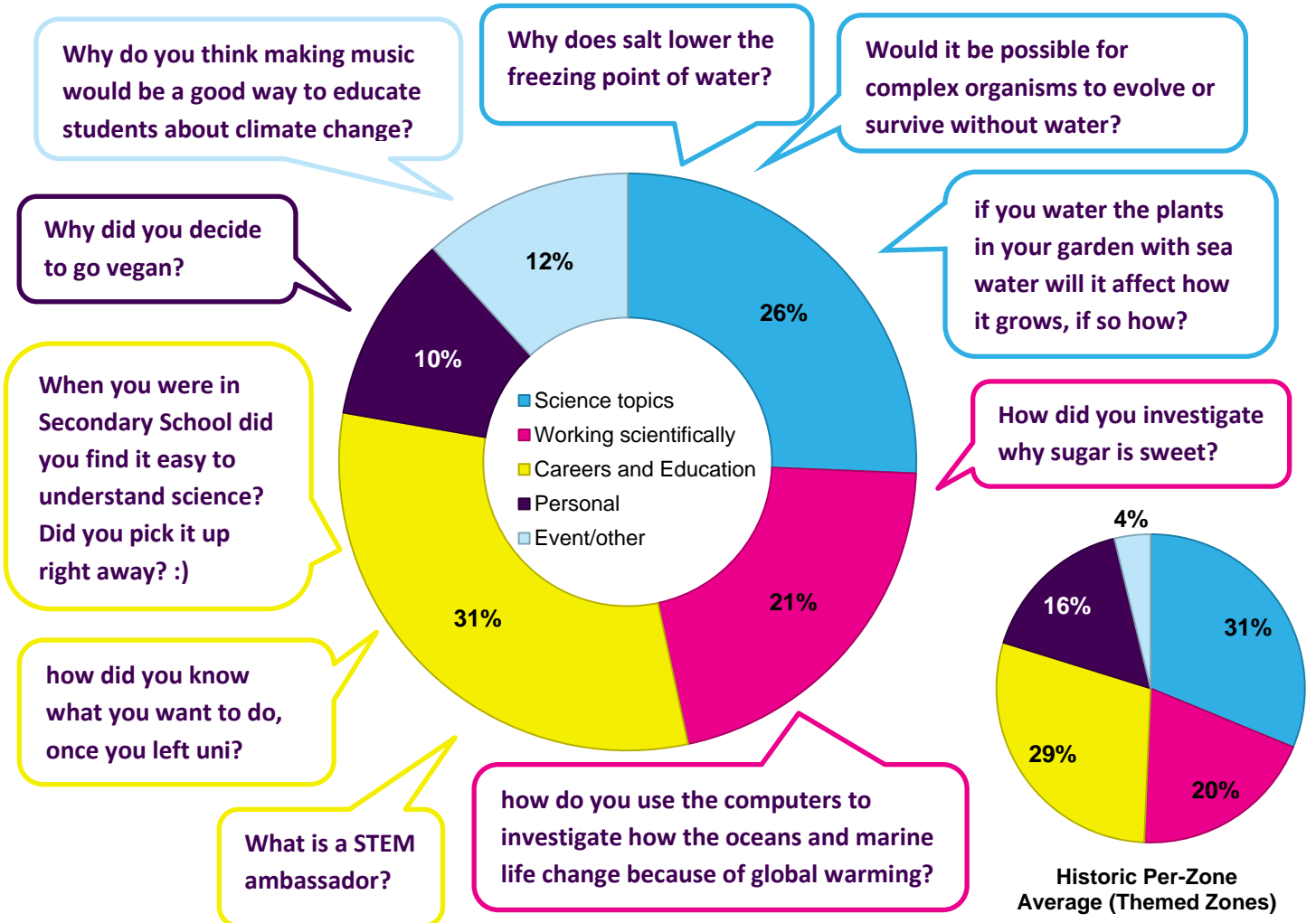
Top Keywords of questions approved in the Zone

Area represents frequency of use



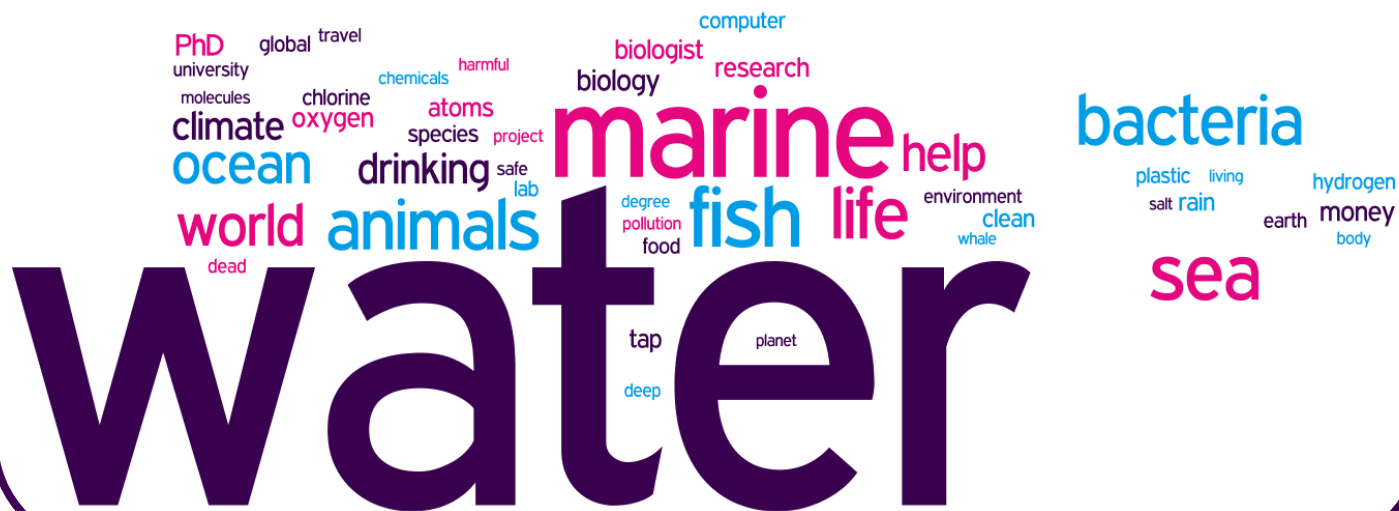
Question themes and example questions in the Zone

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



Chat

Frequent words used in live chats by students and scientists. Size of the word represents its popularity



Examples of good engagement

Students were interested in the context of science, particularly within society and in relation to the general public. The scientists gave detailed answers in response to this student's question:

"How do you think your study could help other people?" - Student

"In the future, climate change means there will be less drinking water for us to drink and what is still there will likely be more dirty and need more treatment. I'm trying to look into the best ways of treating water that removes the most organisms and uses fewer chemicals because some of the chemicals we use today have problems.

For example, chlorine is used in swimming pools because it kills any germs on your body when you get in the pool (or if you go to the toilet in the pool!). That same chlorine but in very very low amounts is used in tap water to kill germs in drinking water too. But chlorine is only made in one place in the UK so it has to get transported by big tankers. When it travels like this, a very big amount of chlorine in one place, if there is a car accident, the tanker could explode. I'm looking into safer ways of getting rid of germs from drinking water, like UV light bulbs."

Natalie, scientist

"We are currently running out of resources (e.g. fish), and with the human population still expected to reach 9.8 billion people by 2050, it is more important than ever to manage our use of resources. Fish and shellfish provide an important protein source for many humans across the globe.

In addition to running out of resources, some types of fishing gear can be destructive to marine habitats. Therefore, part of my job is to develop a way for fisheries managers to calculate the health status of marine habitats and decide whether a fishing activity can continue to happen



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Natalie



Michelle



Lowri

there or if the activity should decrease etc. This approach will be global, and therefore will benefit countless lives of marine creatures and humans alike.” - **Lowri, scientist**

“My research looks for more dependable answers for providing communities clean drinking water and streams. It also is trying the cheapest way to do this. We cannot live without water and if we don't find ways to remove harmful metals, it is going to get super expensive in the future. I hope that my research can help remove some of these costs and concerns.” - **Michelle, scientist**

“It advances our knowledge of what underlying structure (where the atoms are) and dynamics (how the atom moves) underpins the properties of materials. This in turn will help us building new materials and exploiting the properties of the ones we have already.” - **Silvia, scientist**

“As clean safe water is vital for life, I would say my role in testing water and making sure it is free from harmful bacteria would benefit our future for our health. Not only do I make sure water is safe to drink from taps or swim in at swimming pools. I also test at various points of wastewater treatment plants and give feedback to how safe it is. This is useful as once processed treated water is put back into the environment by rivers oceans lakes, making sure this is safe will benefit our environment and marine ecosystem which in return will be beneficial to our future in the long run” – **Scott, scientist**

There was also a lot of discussion around climate change, and human impact on the Earth. Students were interested not just in what they could do to help, but in what affects our actions would have on other animals:

“Oliver how do you think Marine animals will evolve in the future to cope with climate change?” – **Student**

“Good question! One way that organisms cope with climate change is just to move away from areas which are too hot! (behaviour changes). However we also see some evidence that tiny micro-organisms are evolving to adapt, too” – **Oliver, scientist**

“What do you think would be a good solution to stop water pollution” – **Student**

“The European Union is really good at this! We have rules and regulations on water quality which make a big difference. And now, for example, we see otters returning to UK rivers because they are clean (so the answer is policy)” – **Oliver, scientist**



Scientist winner: Lowri Evans

Lowri's plans for the prize money: “I would like to visit all 43 primary schools on the island of Anglesey, where I am from, to talk to them about marine life and the issues facing our oceans today. I hope that this direct engagement would teach, inspire and inform the pupils of the potential actions we can take now to ensure that we improve and maintain the health of marine ecosystems.”

Read Lowri's [thank you message](#).



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Student winner: Bunmi2006

Bunmi2006 from Gable Hall School was nominated by the scientists for 'positively engaging in the conversation'. They asked things like "What are your aspirations?" "What would you do if you got the £500?" and "What research has been done recently?"

As the student winner, Bunmi2006 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] 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**

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

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**

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**

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**