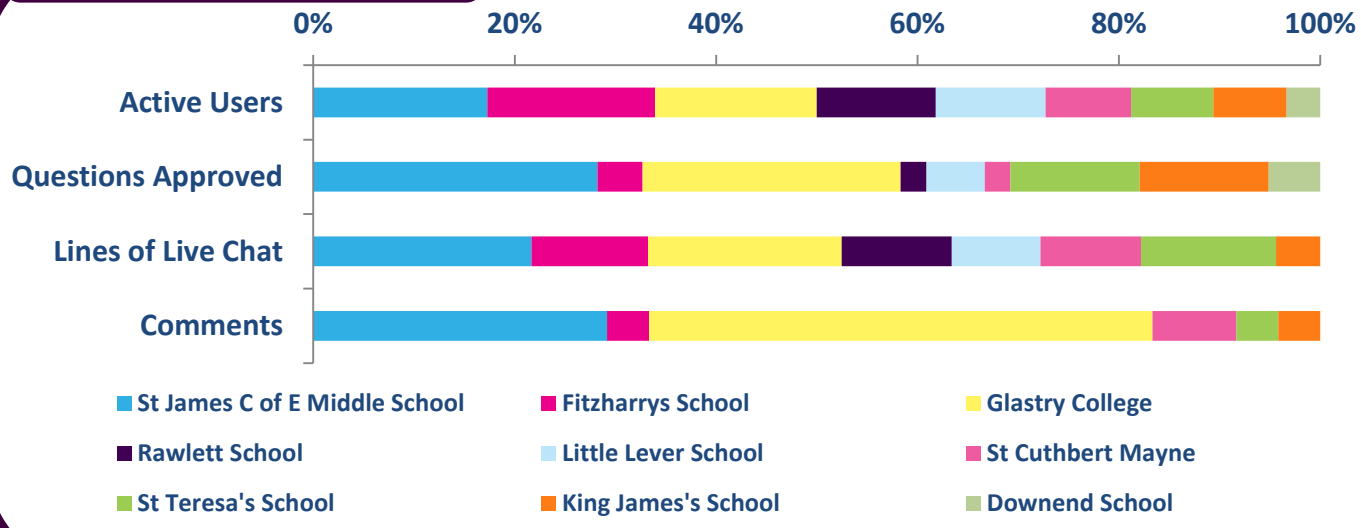
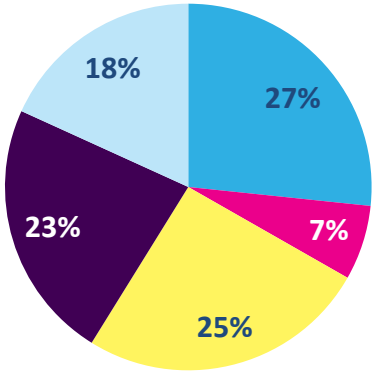
March 2015

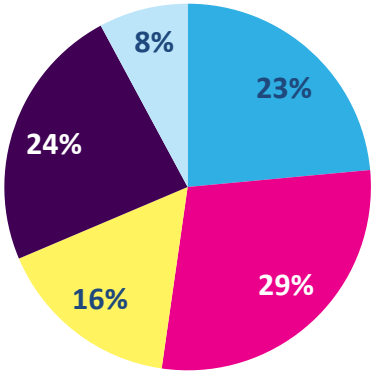
The Green Chemistry Zone involved nine schools and a total of 407 students. The scientists were researching new ways to reduce the environmental impact of industrial processes, from finding alternative fuels to making materials from sustainable sources. The live chats in this zone were busy and Jo, Sankar and Sarah engaged really well in these, with Sarah continuing to attend them after being evicted. It was one of the least focused themed zones for March, resulting in it feeling more like a general chemistry zone.

School data at a glance



Scientists activity





Scientist	Profile views	Position
Jo Sadler	1,051	Winner
Sankar Armeenakshisundaram	886	2nd
Alan Mccue	820	3rd
Sarah Kirk	780	4th
Becky Gregory	652	5th

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Key figures from the Green Chemistry Zone, and the average of the March zones

PAGE VIEWS	GREEN CHEMISTRY ZONE	MARCH '15 ZONES AVERAGE
Total zone	27,027	36,564
ASK page	1,503	2,481
CHAT page	4,738	4,878
VOTE page	1,818	2,422

	GREEN CHEMISTRY ZONE	MARCH '15 ZONES AVERAGE	IAS AVERAGE
Students	407	383	338
% of students active in ASK, CHAT or VOTE	82%	87%	83%
Questions asked	454	496	713
Questions approved	156	238	297
Answers given	379	495	540
Comments	34	45	86
Votes	300	299	270
Lines of live chat	5,257	5,467	4,437
Live chats	13	17	13
Average lines of live chat	404	331	335
Schools	9	10	8

Popular topics

As shown by the keywords, in both CHAT and ASK the theme of discussion was more on general science and general chemistry rather than specifically 'green chemistry'. Students may not have picked up on the sustainable theme of the scientist's work in the profiles. The students were mostly from Years 7-9 and it may be that the topic was not engaging enough yet for this age group who are getting started with chemistry.

Live chats focussed on atoms and chemical reactions with lots of questions on how dangerous the scientists' work was, how often they exploded things, etc. There were questions asking for clarification on enzymes and catalysts, and what the importance was for work using these. Some of the older classes were interested in the scientists work for companies (like Jo and GSK), with questions about how the increased budgets helped their science.

Topics in the questions were varied and there seemed to be little in the way of trends. Three or four questions asked the scientists about the potentials of nanoscience and how it could be applied to fields such as medicine and communication. Students were interested in how diseases were cured, or how disease cures were discovered in the past. A number of questions touched on the Ebola virus, which the other medicine questions were connected to.

Chat

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

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

Example Questions (click for links)

"How would you like to inspire young people to enjoy science?"

"How are chemists trying to achieve 100% atom economy in chemical reactions?"

"Can we use the enzymes in honey to improve medicine as honey has medicinal properties?"

"What are allosteric enzymes?"

"What is your opinion on social media?"

"How do you know the reaction on the animal will be the same on the human?"

"Do you ever feel like it's a shame that the government doesn't put money into certain scientific breakthroughs that could benefit society?"

"Why do you spend your time doing experiments?"

"Who is the person that inspired you in science?"

"How do you think that aspects of nano technology like nano bots could cause medicinal science to evolve?"

"Will there ever be a way of getting vaccinations (eg Cervical cancer jabs) without the use of a needle?"

"What have you done to make the world inspired?"

"What was the most dangerous experiment you've ever done?"

"What is your favourite experiment?"

"If you could have a scientific superpower, what would it be?"

"What is so important about your jobs?"

Examples of good engagement

There was encouragement of scientific thinking in the students and good discussion about the process of science, especially from Sankar and Jo.

> *"Sankar, how do you change your approach after you hit a dead end?"* – **Student**
>
> *"That is the most important aspect of research. We need to be flexible. Think differently. If a glass is half full, next time think that it is half empty (different approach."* – **Sankar, scientist**
>
> *"If I hit a dead end I have a meeting with my supervisors and we discuss the options. Often you have to take a step back then continue in a slightly different direction. Luckily my project is quite varied so there are always lots of different things to investigate."* **Jo, scientist**
>
> *"Sankar, when you were younger when did you decide you wanted to be a scientist?"* – **Student**
>
> *"EVERYONE, the moment you start asking questions, you are a SCIENTIST."* – **Sankar, scientist**

Scientist winner: Jo Sadler

Jo's plans for the prize money: *"I'd run a competition in schools for you to carry out your own piece of research and discover something new- not all scientists wear white coats! The prize? A 'Green Chemistry Starter Pack' for your school. You often don't need fancy equipment, a PhD or goofy glasses to do great science – anyone can be a scientist and help understand and discover more about our world. The winner would receive a £50 prize and a 'Green Chemistry Starter Pack' for their school, including a DVD covering the basics of green chemistry, a handbook of green chemistry experiments and some of the equipment to get you going."*

Read Jo's thank you message.

Student winner: Rosie

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 love u scientists" – **HollyBaconThingy, student**

"I would just like to say thank you - my lower sixth have really enjoyed this– **Parishs, teacher**

"Throughout these last two weeks I have been consistently impressed with the quality of questions" – **Jo, scientist**

"Constantly amazed by what the pupils wish to know about - good fun trying to answer though" – ***Alan, scientist***