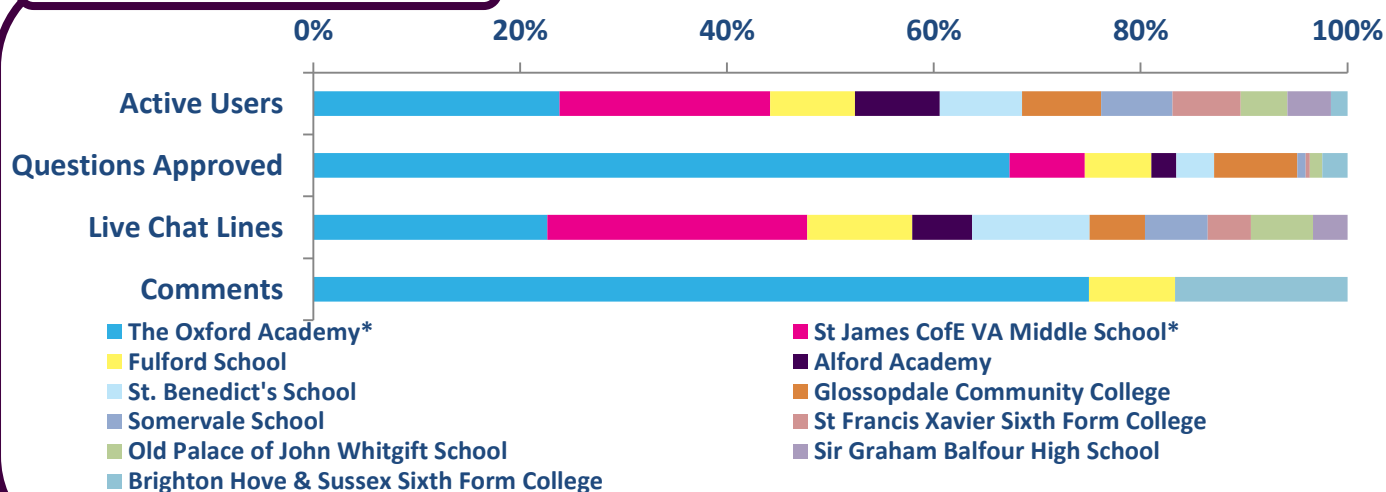


## June 2016

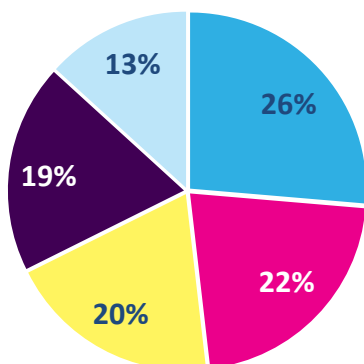
The Catalysis Zone was a themed zone funded by the Royal Society of Chemistry, of which Ruth, Rob, Laura and John were members. Ruth is a PhD student who creates new molecules to see what happens when they react, Rob works for a pharmaceutical company where he ensures chemicals are mixed in the right way and Luke is researching how to make medicines and other chemicals from a bacteria found in a compost heaps. Laura researches how sunlight can be used on reactions to use less fossil fuels within chemistry, and John is a lecturer who teaches organic chemistry and researches how to create new catalysts. This zone had the highest percentage of active students out of all the zones in the June event.

### School data at a glance

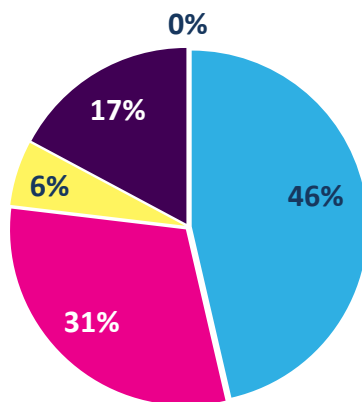


### Scientist activity

#### Answers



#### Lines of Live Chat



Scientist	Profile views	Position
Laura Finney	601	Winner
Luke Williams	428	2nd
John Fossey	360	3rd
Ruth Patchett	455	4th
Robert Williams	347	5th

## Key figures from the Catalysis Zone and the averages of the June zones

PAGE VIEWS	CATALYSIS ZONE	JUNE '16 ZONES AVERAGE
Total zone	20,920	21,638
ASK page	1,523	1,582
CHAT page	3,381	2,737
VOTE page	1,083	1,369

## Popular topics

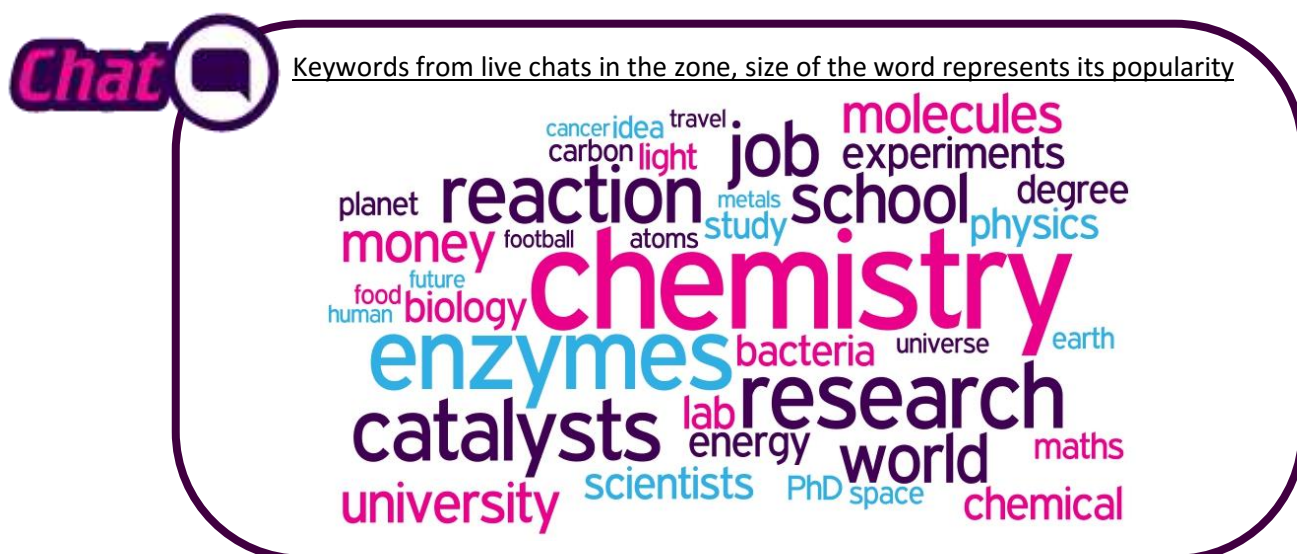
There were some specific questions related to catalysts, with students wanting to know the different types of catalysts and how these can be used. In general the zone wasn't particularly on topic in regards to catalysts, but there were many questions about chemistry as well as interest in science in general and what it's like to be a scientist.

Students were interested in the scientists' research, for example asking Ruth about the ice cream shaped molecules she creates.

They were interested about the applications of the new molecules the scientists' had discovered, and whether they could be used as cures for different diseases.

The scientists were very open with their answers and all were good at discussing controversial and current topics with the students. Students showed awareness of current event through questions about politics such as the EU referendum, which took place during the event, and the presidential campaign in America.

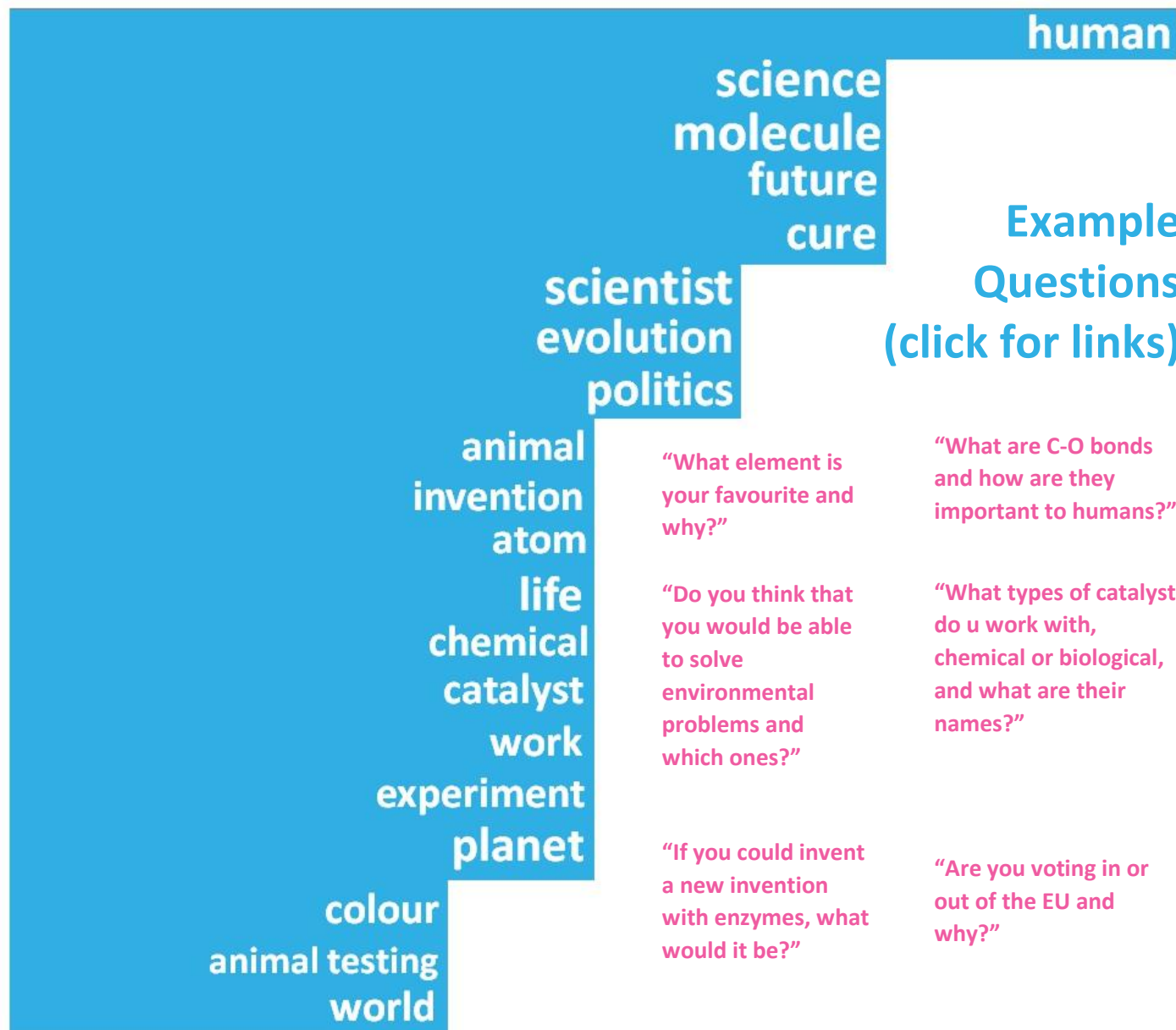
	CATALYSIS ZONE	JUNE '16 ZONES AVERAGE	IAS 2012-16 AVERAGE
Schools	11	13	10
Students logged in	412	429	364
% of students active in ASK, CHAT or VOTE	92%	89%	85%
Questions asked	745	563	704
Questions approved	248	253	303
Answers given	816	550	554
Comments	36	47	79
Votes	348	327	288
Live chats	24	21	15
Lines of live chat	9,017	6,422	5,049
Average lines per live chat	376	304	329





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

0 1 2 3 4 5 6 7 8



## Example Questions (click for links)

"What element is your favourite and why?"

"What are C-O bonds and how are they important to humans?"

"Do you think that you would be able to solve environmental problems and which ones?"

"What types of catalyst do u work with, chemical or biological, and what are their names?"

"If you could invent a new invention with enzymes, what would it be?"

"Are you voting in or out of the EU and why?"

"If light is reflected and white is made up of the main 'rainbow colours', so the primary ones make secondary colours, does that then mean that everything is actually white?"

"What is the petrochemical industry?"

"Have you ever encountered an explosion while splitting a molecule?"

"Is there such a thing as an 'anti-catalyst' that could slow reactions down? If so could that be used to increase the length of a human life, or possibly slow down cancer cells from causing harm?"

"Is there any way of making artificial wings and changing our bone type to fly like birds?"

"Are you trying to find ways to limit the usage of antibiotics by making new drugs?"

"Can catalysts be used for medical reasons?"

"What are the discoveries that have lead up to your current work?"

## Examples of good engagement

There were questions about how chemistry research can be environmentally friendly, which led to some good conversations in the live chats between students and scientists.

*"@Luke is the use of these enzymes friendly to the environment??"* – **Student**

*"Yes it is, typically an enzyme reaction is more friendly to the environment. That said, they usually also use a lot more water, so this can be a problem."* – **Luke, scientist**

*"Why is the use of more water a problem?"* – **Student**

*"Because using such high volumes of water can make a process unsustainable. On industrial scale that may be thousands or hundreds of thousands of tons of water. If it's possible to reuse that water in the process, after cleaning it, then that is better"* – **Luke, scientist**

*"Speaking about water consumption, do you think there is a way to solve the problem of the water crisis in some undeveloped countries?"* – **Student**

*"Desalination is the about the only thing that comes to mind."* – **Luke, scientist**

*"Is this possible in large quantities?"* – **Student**

*"Yes, just very very high energy usage"* – **Luke, scientist**

*"Thanks for some brilliant answers"* – **Student**

## Scientist winner: Laura Finney

Laura's plans for the prize money: *"I would really love to use the money to design some cool, interactive activities to take to science fairs and festivals like the Green Man Festival or Cheltenham Science Festival across the UK."* Read Laura's [thank you message](#).



## Student winner: tungsten24601

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...

*"This is a very new and innovative way of tackling engagement which is great for everyone...It means the students hear from different scientists from across the country. I have taken part in school visits, the big bang fair, open days, conferences etc and found this to be as good if not better."* – **Scientist**

*"I have learnt that that scientists can be cool...it was a great experience on a whole."* – **Student**