



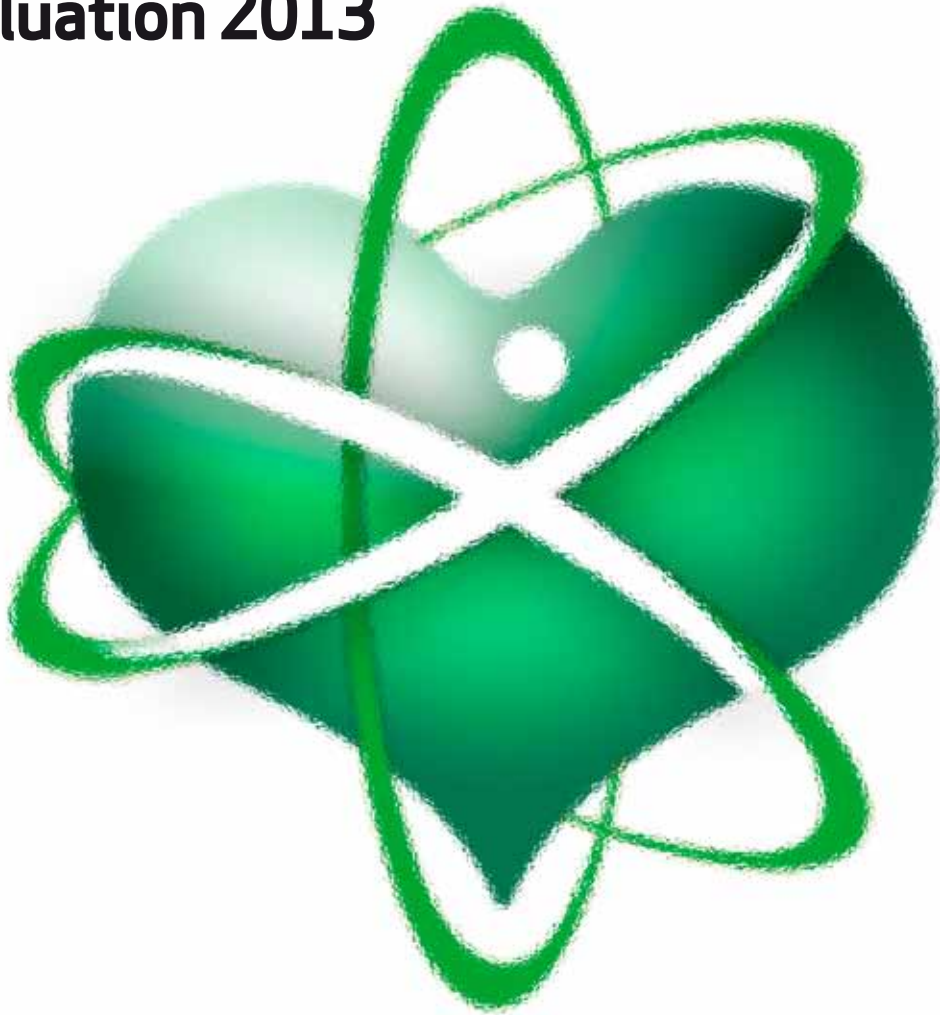
Celebrating 10 Years!

science4u.info Schools Science Conference 2013

Science for Living

Scientists and Healthcare Professionals showcasing exciting careers in science

Chairman's Report & Evaluation 2013



Science for Living

The 10th Annual Schools Science Conference is presented by science4u.info in partnership with The Royal College of Pathologists



science4u.info
showcasing exciting careers in science



The Royal College of Pathologists
Pathology: the science behind the cure

Chairman's report

The 19th of March dawned as 100 volunteers prepared to describe to 250 secondary school students the role of science in life at the 10th Annual Schools Science Conference, [Science for Living](#).

Registration was swiftly followed by some brief housekeeping guidelines and then the students started the day with a fantastic talk by Lord Winston who highlighted the role of science in life. This was our 10th annual conference and the fourth in this prestigious building. There was a real buzz of excitement and anticipation from the students and presenters. Throughout the day, The Royal College of Pathologists hummed with discussion and laughter as the students learned about the kidney and human health, discussed the role of modern genetics and debated how much information they would want to know about their own genomes, presented their own projects and interacted with volunteer scientists.

There were four exciting sessions.

The Kidney: An organ for Living

This Interactive session sponsored by The Royal College of Pathologists and the IBMS demonstrated the role of the kidney in human health and disease. The students handled pathological specimens, tested biological samples and found out about the vital importance of the kidney.

Science for Living

In Science for Living the students discussed the new techniques used in genetic sequencing. They then debated the implications from the information obtained from such tests especially what they might like to know about themselves. Lively discussions occurred and everyone was respectful of the different opinions that were shared.

Science in Practice

A series of hands-on interactive displays showcasing what healthcare scientists do and giving the students a chance to meet the scientists, discover what they do and why, as well as trying some of the tasks for themselves. In this informal and fun session, the students were able to see the practical application of what they have been learning in the school classroom and gain an insight into the different career paths available to them. The activities ranged from blood transfusion, microbiology, transplantation, radiotherapy, resuscitation, physiotherapy, perfusion, immunology, histology, haematology, audiology, cardiology, genetics, pharmacy, nuclear medicine and much more. There were lots of opportunities to win prizes for taking part. The students asked lots of searching questions, including what the scientists enjoyed about their jobs and what qualifications were needed.

Student Presentations

This was an opportunity for the students to present research of their own. The projects ranged from testing the cleanliness of equipment to testing the thermal properties of cups. The standard of research and presentation was excellent, and the judges had a difficult time in determining the winners.

Taking the Buzz Back to the Classroom

The conference also hosted a teachers' workshop. Provided by the British Science Association, the workshop provided practical hands-on ideas for clubs and classrooms, as well as information on the CREST Awards scheme. This enabled the teachers to take the conference back to their schools so more students could benefit.

The Conference Overall

250, years 9 to 11, students (ages 12-16) and their teachers took part in the day. They were split into groups of about 75 per session. The sessions were repeated 4 times, but each was very different because of the involvement, enthusiasm and questions from the different groups of students and the volunteer scientists. There were many things to collect and the students went home with bags full of pens, toys, sweets, rulers, pads, prizes and leaflets about careers. Importantly, many of the students who attended state that they will continue to study science at A level and beyond. Equally important, a number of students who plan to leave education at 18, are now considering careers in science and the NHS.

Several of the students wrote excellent reports of the day for the Reporter Competition and these along with photographs can be seen on the conference website: www.science4u.info



Feedback has been very positive. One teacher wrote:

'Can I say a big thank you to yourself and everyone else involved in the day it was another fantastic day. The students came away really inspired about science and having learnt a lot which they felt they could use in their upcoming GCSE exams/BTEC assignments. A lot of our students come from a background where they are not able to get advice about career options or to talk to adults about their experience of working life. They also lack the background knowledge about life and current issues in the world around us. Watching the students on the day and talking to them afterwards they really seemed to enjoy the opportunity that this day gave them to interact with adults in a positive and informative manner and hands-on nature of the day.

I also felt that the timing of the activities and organisation was excellent and suited the needs of the students perfectly.

Thank you again and I am looking forward to next year'

Most importantly the students had a great educational time with comments ranging from 'Amazing' and 'Awesome' to praise for the speakers and volunteers. Of the students who completed the evaluation after the event, when asked whether they would recommend this event to their friends all said YES! When asked after the event, whether they would consider a career in science, 85% students said definitely, or probably and only 15% students said probably not.

The Organizing Team and I are very grateful to all of our presenters for giving their time and for their inspirational sessions. We are also indebted to the College and our many sponsors. This event would not be possible without them. This was the fourth time that the College has hosted this event and it was wonderful to promote healthcare science to these students: our future pathologists and healthcare scientists.

Kimberly Gilmour

Kimberly Gilmour

Chairman of the Organising Committee

Thanks to the following organisations for their generous support:



IOP Institute of Physics



PHILIPS



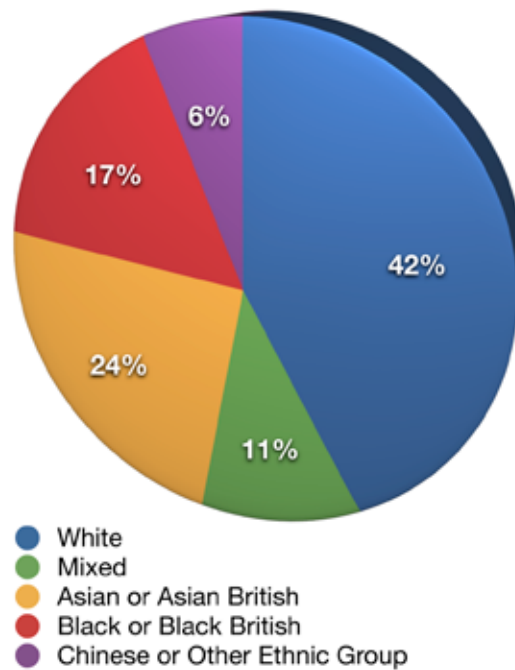
Chairman's Report

Evaluation Report

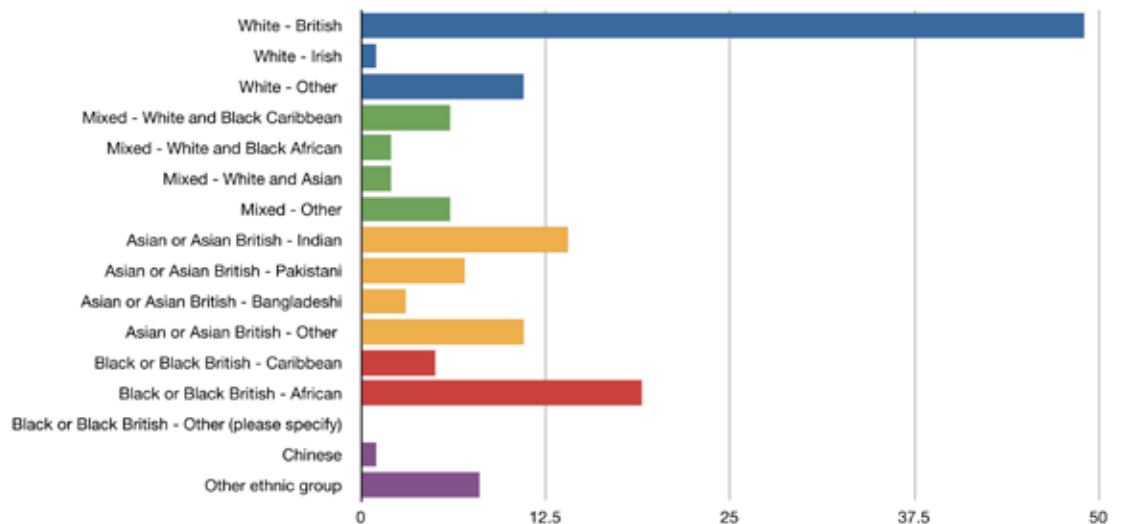
The 10th annual Schools Science Conference - Science for Living - was held at the Royal College of Pathologists on the 19th March, 2013. This is a conversational event aiming to bring scientists and students together to discuss science and science careers. A total of 240 students in years 9 to 11 from secondary schools and colleges across London attended. They were accompanied by their teachers and teaching assistants. The event was organised by an enthusiastic group of volunteers consisting of scientists from various London

Diversity

What is your ethnic group? - Overview



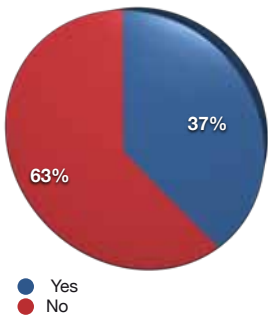
What is your ethnic group? - Detail



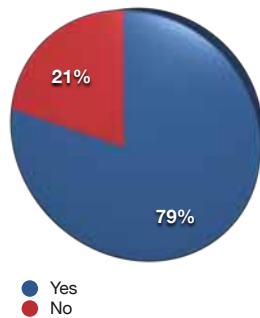


hospitals, colleges and associated organisations. 100 volunteer scientists mainly from the healthcare sector were recruited to showcase their professions. Students from the Health Protection Agency acted as hosts conducting the students around the different activities. Professor Lord Robert Winston kindly gave the opening address and spent time participating with the students in the various activities. The students, teachers and volunteers were asked to complete an evaluation form and this is the summary of the responses.

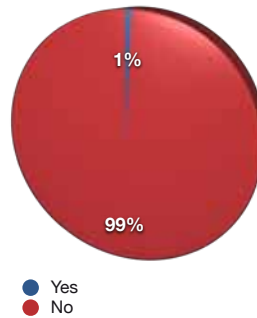
Do you have school dinners?



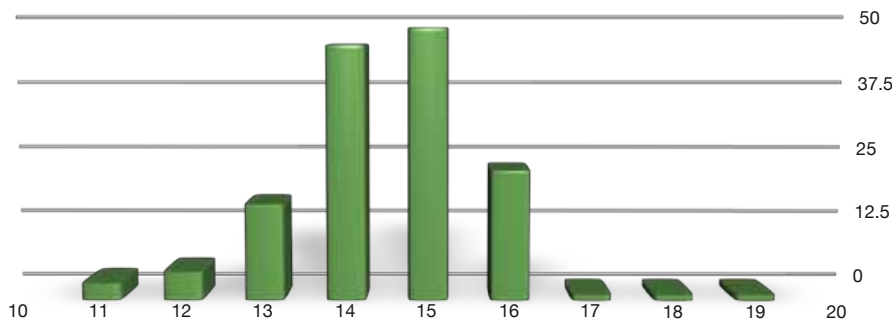
Do you speak English as a first language?



Do you consider yourself to have a disability?



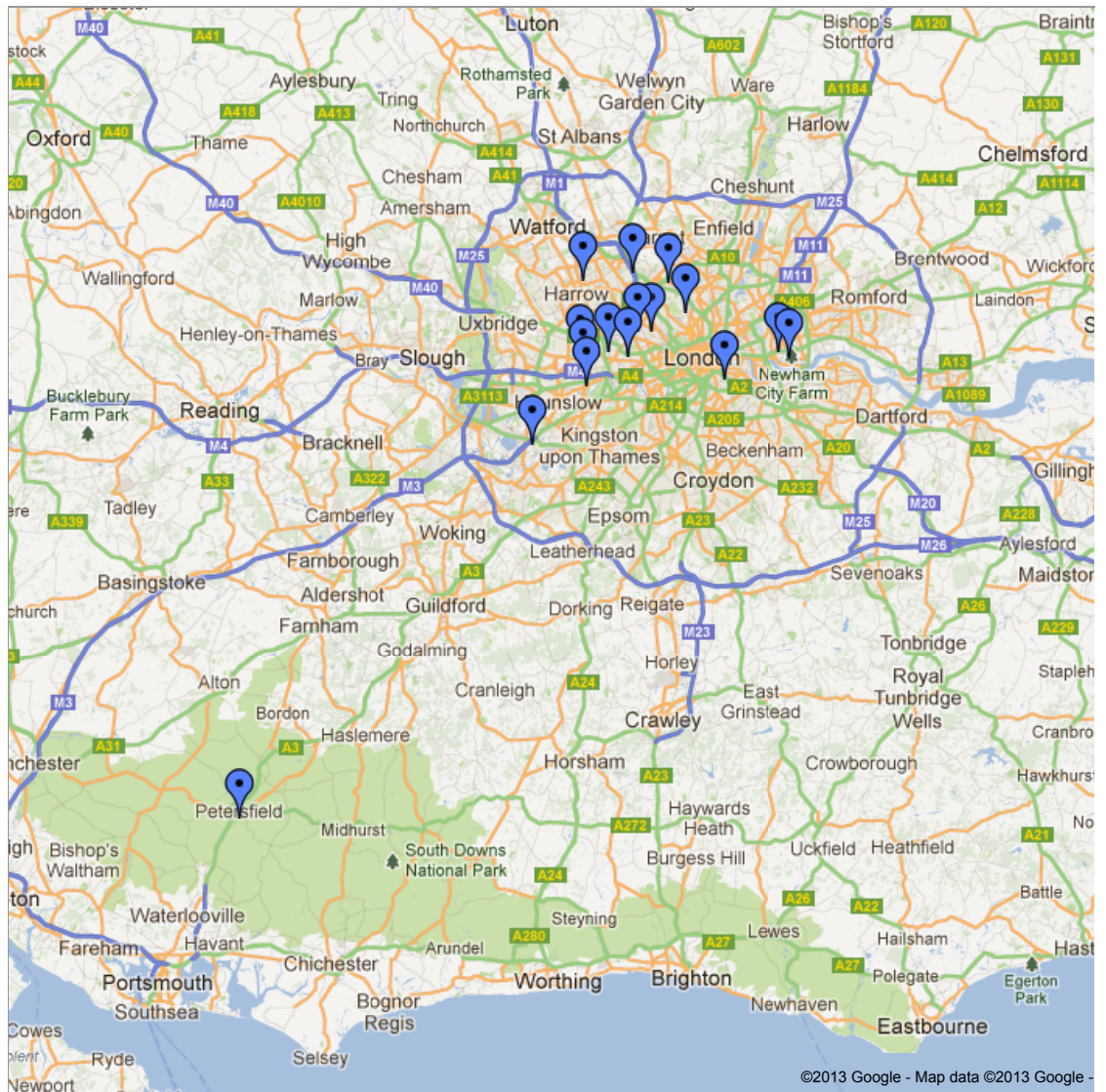
Ages of students



Students came from schools across greater London and beyond. Evaluation returns were obtained from a high percentage of students. These show that the students were from an extensive range of ethnic backgrounds and that for a high proportion English is the second language. As an index of socio-economic status, a high percentage (37%) of students receive free school meals. A high proportion (99%) are able-bodied. The majority of students were in the 14-15 years age category. An aim of the conferences is to target students who, normally, might not consider studying science and who might not know about potential careers in science.

Evaluation Report

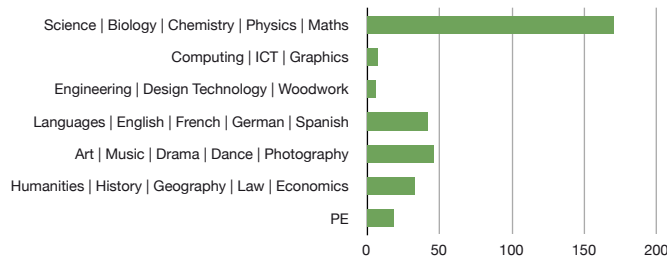
Location of schools attending Science for Living



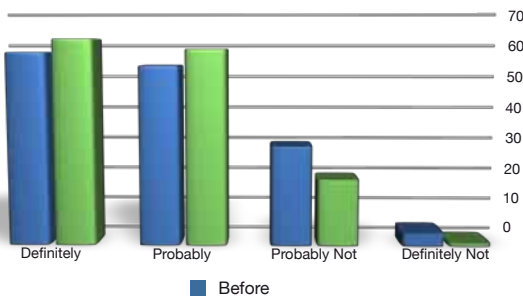


Students' Comments

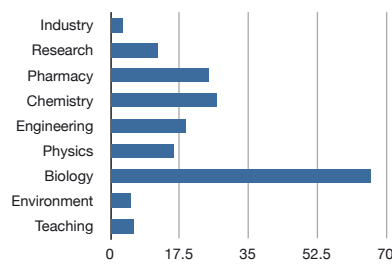
Which school subjects interest you most?



Had you considered a career in science?

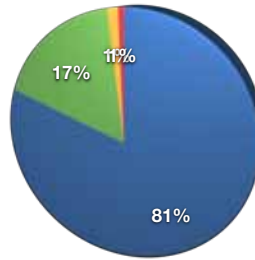


If you answered definitely or probably, in what area?



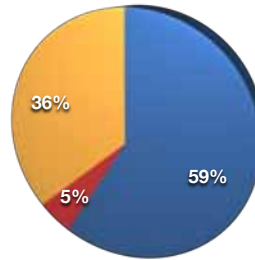
From the returns it appears that teachers are bringing along students with an interest in science, but the returns show that the conference did stimulate the students to study science in school and beyond, and to consider a future career in science broadening the range of sciences and potential careers. Interestingly, 75% of the students did not know that there are healthcare science jobs and careers that do not require a university degree. Before the conference only 17% of students had considered a career in a healthcare science. The conference increased the range of potential science career options for the students. It was very obvious on the day and confirmed by the evaluations that the students really enjoyed meeting the scientists, finding out about the range of scientific careers and taking part in the various scientific activities. Ninety two percent of students said they would recommend such events to their friends.

BEFORE: Were you considering going to University or Further Education College?



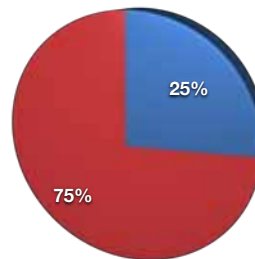
- Definitely
- Probably
- Probably Not
- Definitely Not

AFTER: Are you more likely or less likely to consider going to University or other FE College?



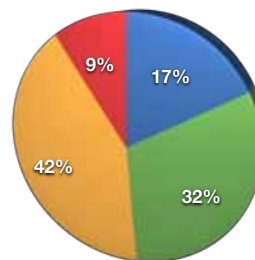
- More likely
- Less likely
- Unchanged

Were you aware that there are healthcare science careers that do not require a university degree?



- Yes
- No

Had you considered a career in healthcare science within the NHS?

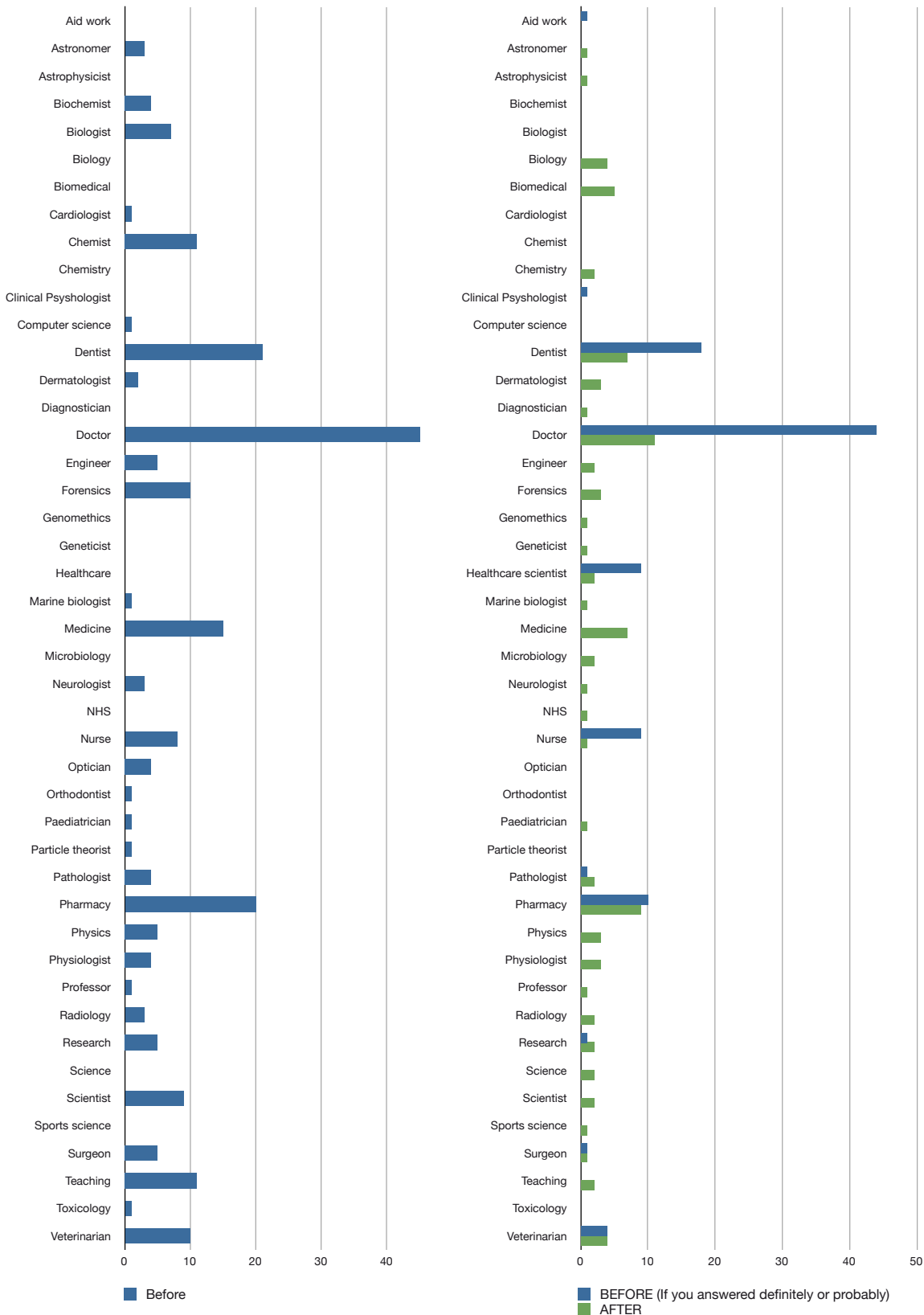


- Definitely
- Probably
- Probably Not
- Definitely Not



What careers in science were you aware of?

What Science Careers would you consider taking up?

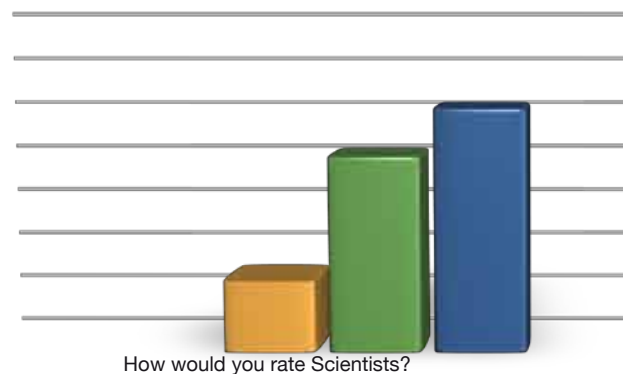


Evaluation Report

What do you think about science professionals?

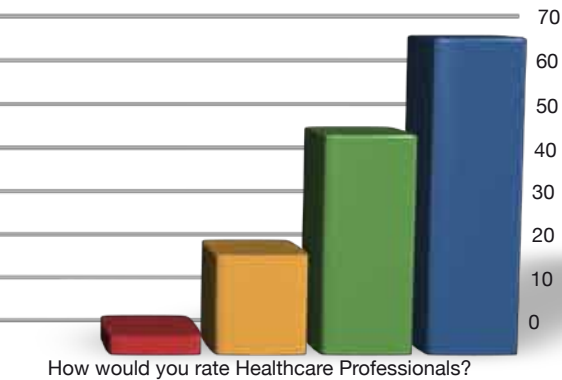
- Adventurous and daring
- Amazing, inspirational
- Awesome
- Clever
- Cool
- Determined
- Engaging
- Essential to a good quality of life
- Excellent
- Exciting
- Extremely talented
- Good intellectual individuals
- Great people
- Hard working
- Helpful
- I admire them
- I have respect for them
- I think they are all interesting because they are always explain and trying new things
- I want to do something in the medical field
- Important to society to be respected and admired
- Interesting and intelligent
- Interesting careers
- It is useful
- I've realized that there are more careers to science
- Love it
- Lovely people
- Nice and friendly
- Passionate
- Skilled
- Smart
- They are clever
- They are contributing significantly into finding and developing new things
- They are focused on research
- They are good
- They are good at science
- They are good at their job
- They are hardworking
- They are interested in science and their job
- They are interesting
- They are smart individuals
- They do help people a lot
- They help in many different ways
- They know their science
- They know what they are talking about
- They love their job
- They seem nice
- They were good explainers
- They were informative
- They're brilliant
- They're lovely
- They're nice guys and dolls

How would you rate Scientists and





Healthcare Professionals?



What do you think about healthcare professionals?

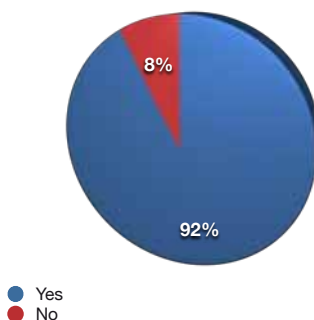
- Amazing and helpful
- Awesome
- Beneficial to society
- Cautious intense
- Clever
- Committed
- Cool
- Creative
- Crucial in saving lives
- Determined caring intelligent
- Essential
- Excellent
- Fantastic
- Friendly and caring
- Good at their job
- Good, interesting people
- Great
- Hard working
- Have an interesting job
- Helpful
- I think they are doing a good job and try and help the world
- Important jobs
- Inspiring
- Intellectual
- Intelligent
- Interesting
- Kind
- Live lives with difficult decisions
- Motivated
- Nice guys
- Noble
- Patient and committed
- Respectable
- Smart
- They're good at healthcare
- They are cool
- They are hardworking and helpful
- They are helpful
- They are important
- They are more focused on helping people more than achieving something themselves
- They are occupied
- They are useful people
- They can do amazing things
- They do a great job
- They help a lot of people
- They help us with every day things and are very polite
- They save lives
- They seem nice
- They think more about helping people
- They're good at their jobs
- They're great
- Trustworthy
- Very good, very clever

Evaluation Report

Are there any comments you would like to make about today's event?

- Amusing and interesting
- Brilliant event
- Everyone was so energetic and fun
- Everything was awesome
- Everything was perfectly clear, thank you
- Excellent experience and I learn a lot of things and convinced me that a career in science is what I would want in the future
- Good
- Great
- Helpful in showing me careers in science
- I found out about more careers in the medical field
- I had lots of fun
- I really enjoyed it and would recommend it to anyone thank you
- I think that this event was very useful and I got loads of information
- I would definitely want to take part in something like this again
- I would like to attend more of these events in the future
- It has furthered my confidence in terms of careers that are enrolled in biology
- It has made me consider a possible career in the medical field
- It has opened my mind to a wider range of science it has also made possibly have a career with science
- It was a very interesting and inspiring I learnt a lot
- It was a very interesting journey and very educational
- It was an amazing experience and I hope to be back in future
- It was fantastic and should be done more frequently
- It was lots of fun
- It was really cool and interesting and would recommend this to other youths in my area
- It was really good, hope every year we can get the opportunity to do it.
- Just the bomb really, the best cheers bud !
- Love the freebies
- Magnificent I really enjoyed it sublime experience
- Refreshments would have been lovely
- Should happen more often
- Thank you for the good experience
- Thanks for a lovely day
- Thanks for the free stuff
- The session area was interesting my favourite part was Science in Practice
- Today event was exciting I loved it
- Today has been very fun and interesting and I have learnt a lot
- Today helped me make more decisions
- Today's event was inspiring
- Very educational interesting fun
- Very informative and interesting
- Very informative and thank you for having us

Would you recommend this event to your friends?





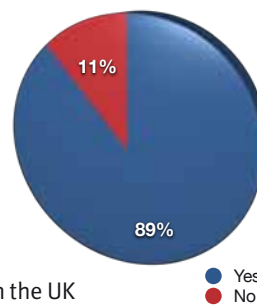
Volunteers' comments

Eighty nine percent of the volunteers believed that the conference was beneficial to themselves and to their organisations.

Has the event been beneficial to you or your organisation? (and reasons for comment)

Yes

- Opportunities to promote radiotherapy are always welcome
- Raising awareness of noise damage and ear care. Promoting our audiology services. Talking to students about perspective audiology and its prospects as a profession.
- It was great interacting with the students which were generally interested in science. The entire event was extremely rewarding
- As a biomedical scientist I felt like an ambassador for the profession. Histology/pathology plays an important role in science
- Helped to promote careers in healthcare that's not just doctors and nurses
- Able to meet young people and teachers and talk about blood and how it is used in the UK
- It gave our volunteers the opportunity to inform students of our role as cardiac physiologists. Many students will only assume being a nurse or doctor are what makes hospital staff but there are so many more disciplines involved such as physiological sciences



No

- However it has been a good way of promoting our profession and the career of pharmacy

What have you enjoyed about the event today?

- Yes, It has been very formative/picked tips for a potential career as a clinical scientist
- Interaction with interested students, nice sandwiches!
- Interacting with students and teachers. Enjoyed my students, teaching students about hearing conservation and about their experiences
- The students have been interested in the exhibits and enjoyed the quizzes and interactive stand
- Being able to teach the students how histology plays an important role in science and life and how the different medical careers will contribute to general well being of a patient
- Interaction with all ages and backgrounds
- Interaction with the students and getting them interested in healthcare issues like diabetes
- The confidence and intelligence of the students and the questions they asked
- Interacting with the bright students of our future

What can we do to improve the event in the future?

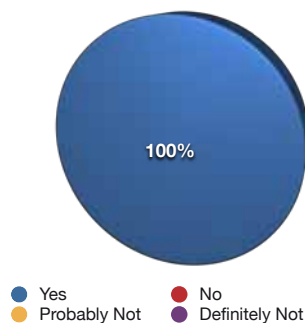
- Lunch break is always a tight time. Broaden demographic to college age?
- We did find floor space was a slight issue but we did manage well and event ran very smoothly. Very grateful to Sharon for all her help. Thank you
- Give the children more time to come through the exhibits and ask questions. Timings were very tight not much of a break
- I feel the age range for some of the students was quite young and older 16-17 years will benefit more from this type of event as, there will be more information available for different career pathways in the science profession
- Science needs to be promoted in children of all ages but as histology is a specialist field, the younger children struggled with understanding the concept.
- Maybe have smaller groups but wasn't too much of a problem!
- Keep doing it! It's such a joy to be part of it and this is our 5th Year!
- Larger floor space, the volunteers found it very cramped. We congratulate all our colleagues for volunteering and hope for a lot more in the future. However, we hope for more room to do so.

Teachers' comments

What was the most benefit to you and your students?

- Careers Section useful
- Science In Practice of benefit
- Different Jobs in Science
- Hands-on Displays
- Speaking to real scientists about careers, demos etc
- The presentation form the scientists
- Hands-on speaking to people on stalls
- Hands-on part and The Kidney session
- Students' Science Project

Was the event useful to you and your students?



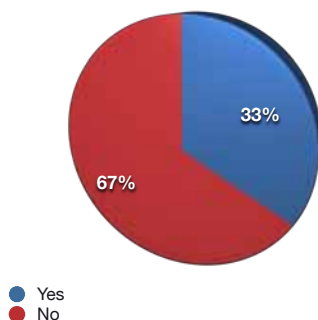
What was of least benefit to you and your students?

- Ethicts talk - couldn't discuss
- Presentations
- DNA in science for living
- Science for living could not have real discussion
- Science for living - discussions a little unfocused
- The student presentations - time period should be increased
- Student presentations
- Nothing

How could we improve this event for you and your students?

- More room - be more specific about project if want an experiment don't give research option etc
- All rooms organised to facilitate the types of activities planned for
- Needs more space
- Venue was a little cramped;students would have liked a dedicated space for lunch
- More enthusiastic participants
- More time at science in practice
- Less crowded
- In the science for living could have a different room layout eg 4 circles for small discussions/debates
- Bigger rooms less crowded
- Logistics especially space for lunch and the IT problems during the introduction.We felt the winners of the student presentations had not followed the project criteria which upset our students who did stringently

Do you know of any instances where students have chosen a career pathway into science?



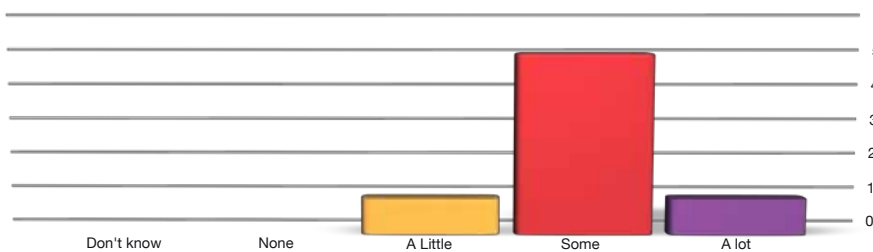
Comments

- Students chose A-level sciences and biomedical science
- Several students have progressed onto our Btec Science programme and then onto biomedical science at university
- My IGCSE students two years ago decided to take science as a career of life (the group that we took in 2011)

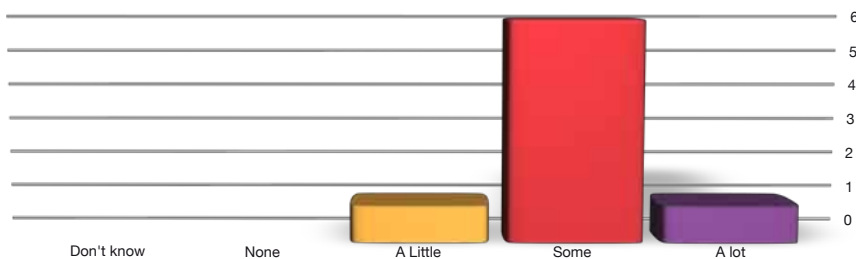


Universally, the teachers felt that the conference was useful and benefitted the students and themselves. They all stated that these conference motivate their students to study science and to think about science career options. Before the conference many of the science careers were unknown to the students. Sixty seven percent of the teachers reported that previous conferences had influenced student A-level choices and career aspirations and progression. The comments showed that all of the activities were useful and enjoyed by themselves and their students. Other comments tended to focus on what had gone wrong in various sessions and problems associated with the venue, mostly regarding space. Possibly, we are attempting to cram in too much.

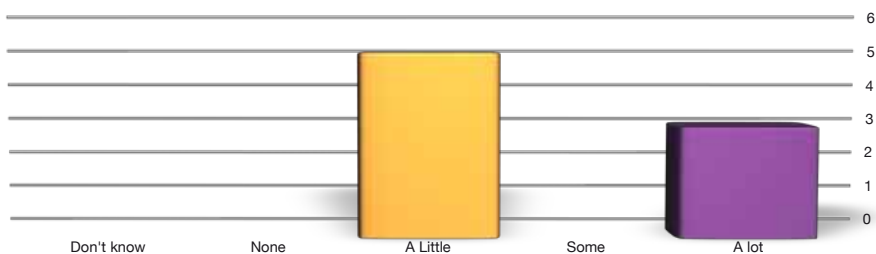
What impact has it had on subject choice?



What impact has it had on their career aspirations?

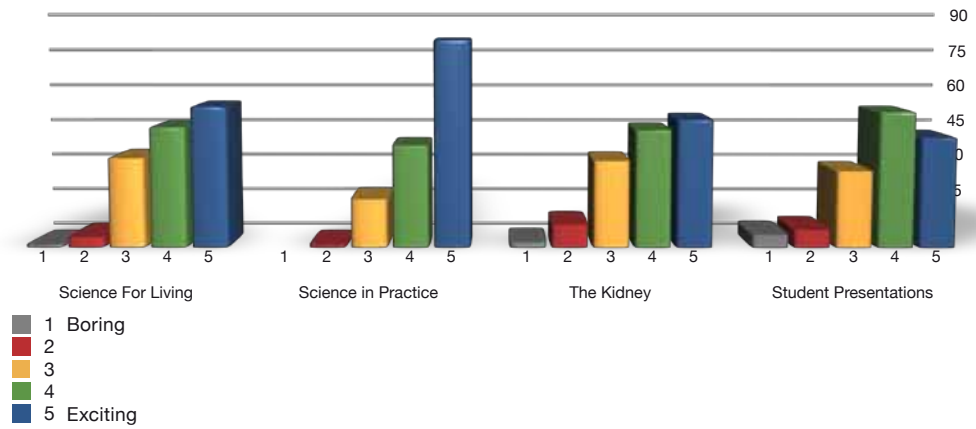


What impact has it had on their motivation to study science?

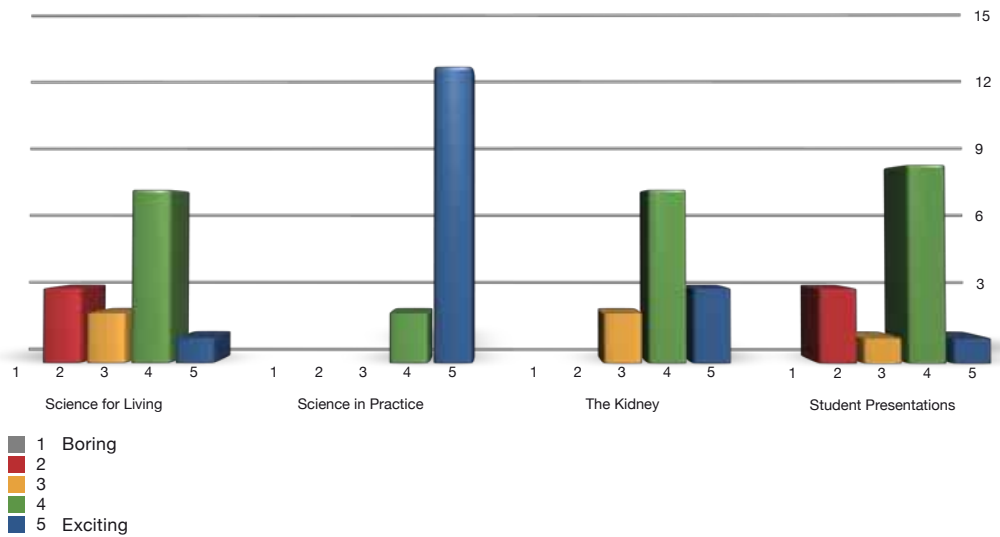


The Sessions

STUDENTS: How would you rate the 4 activities?



TEACHERS: How would you rate the 4 activities?

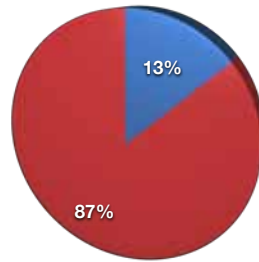




The Website

Students' comments

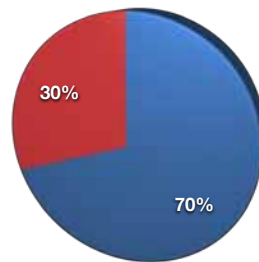
Have you used the conference website, science4u.info?



● Yes
● No

Teachers' comments

Have you used the conference website, science4u.info?



● Yes
● No

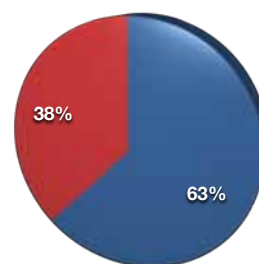
Will the Virtual Laboratory Tour help with your lesson plans?



● Yes
● No

Volunteers' comments

Have you used the conference website, science4u.info?



● Yes
● No



Thanks to the following organisations and their staff for this year's event

- Association for Clinical Biochemistry
- Biotechnology and Biological Sciences Research Council
- British Society for Immunology
- Cancer Research UK, London Research Institute
- Central London Community Healthcare NHS Trust
- Great Ormond Street Hospital for Children NHS Foundation Trust
- Hounslow Wheelchair Service
- Institute of Biomedical Science
- Hampshire Hospitals NHS Foundation Trust
- Imperial College Healthcare NHS Trust
- Imperial College London
- Institute of Physics
- King's College London
- Labtech International
- London Ambulance Service
- London Pharmacy Education & Training
- London School of Hygiene & Tropical Medicine
- NHS Blood and Transplant
- Queen Mary's Hospital
- The Royal College of Pathologists
- Richmond Community Healthcare NHS Trust
- Royal Free London NHS Foundation Trust
- Society of Biology
- St Albans High School for Girls
- St George's, University of London
- The Blizzard Institute
- The Royal Marsden NHS Foundation Trust
- University College London
- University College London Hospitals NHS Trust
- Wellcome Trust Sanger Institute, University of Cambridge

Schools Science Conference Organising Group 2013



Don Henderson (Founder & Co-Chair)

Kimberly Gilmour (Chairman)

Great Ormond Street Hospital For Children NHS Trust

Sue Alexander

The Royal Marsden NHS Foundation Trust

Manfred Almeida (Treasurer)

Imperial College Healthcare NHS Trust

Sarah Armstrong

The Royal Marsden NHS Foundation Trust

Mike Carter

The Health Protection Agency

Georgina Lavender

georgina's science

Rebecca Macrae

Barts and The London NHS Trust

Maria Rossini

British Science Association London, Institute of Education

Sharon Gage (Event Organiser)

SRG Project Management