

Experience cancer research

Evaluation report of an interactive careers open evening



Students tour the Breast Cancer Now lab with David Robertson

Experience cancer research



An activity from the Biochemical Society at the event

Executive Summary

The Institute of Cancer Research, London, was the recipient of an outreach grant from the Biochemical Society.

We used this grant to deliver *Experience Cancer Research*, an interactive careers event for sixth-formers held at The Institute of Cancer Research (ICR.) We hoped to inspire the next generation of cancer researchers by providing practical experiences, careers discussions, and offering students the chance to step inside working science labs.

The evening was developed and created with the help of colleagues from within the ICR, engagement professionals from external organisations Cancer Research UK and the Biochemical Society, and with support from staff members of The Royal Marsden NHS Foundation Trust, and

We worked to ensure that the evening fit all of our aims:

1. The overarching aim of our event was to help inspire the next generation of cancer scientists, providing a unique experience for local young people at a critical point in deciding their future careers.
2. We aimed to reach a diverse group of students from the local area.
3. We aimed to make the event scientifically accurate, reflective of current research, and including all of the sciences that contribute to cancer research, including structural and molecular biology, biochemistry, chemistry and physics.
4. We aimed to design attractive activities and visual aids that will engage the students with the ICR's research, which will then become lasting outputs for use again at later events.
5. We have evaluated the project, and now plan to make this event recurrent.
6. We hope to use this event to develop lasting links with schools in the borough, and continuing to build on these relationships after the event

Evaluation



The students are welcomed to the ICR

We held the event for almost 70 students and seven teachers, from a total of six local schools.

The students all had the chance to visit a working lab, and to take part in interactive activities and a careers discussion table. Every aspect of the evening was named as a favourite activity by at least 20 students, with almost half of respondents appreciating the opportunity to see a lab best.

Most feedback focused on the inspirational nature of the evening. People said their favourite activities interested and inspired them, and gave an insight into the real world of research. 89 per cent of respondents strongly agreed or agreed with the statement that they were more inspired about a career in science after the evening.

Feedback from students and teachers revealed more desire for practical career advice on routes into work or university. We plan to work with external organisations in the future to provide this.

Over 30 members of ICR staff were involved in the evening – they also gave positive feedback, saying that they were briefed effectively, had enough time to prepare, and enjoyed taking part in the event.

The final cost of the event was £1164.73 – accounting for the support of the Biochemical Society grant this means that the ICR spent only £164 on the event, including resources such as the professionally designed posters and a microscope that we will use again in future.

Selected feedback:

Everyone was so lovely and passionate; they gave a lot of interesting information that strengthened my love for science - Student

I enjoyed seeing practical equipment in reality, as opposed to in theory – Student

A great success and so smoothly run – Teacher

Evaluation

I really enjoyed it and all the young people I spoke to were really engaged and switched on. They were also chatting away to me about all the other things they'd been doing over the afternoon which I think is a good sign – Volunteer



Students discuss science with PhD student Mara Mandelia

Meeting our objectives

As we developed the event, we proactively sought to make sure that the content and design would be suitable for our purposes, using formative evaluation to ensure that it would be fit for purpose.

We were guided by our objectives:

- 1. Our objective is to reach at least 80 local young people, giving them chance to meet ICR scientists from varied and exciting careers and the chance to see cutting edge science carried out in a lab.***
- 2. We will do this by approaching every school in the borough with a sixth-form, and will ask that they bring a representative group of young people, with an equal gender balance, and a focus not only on biology students but on those studying chemistry and the other sciences as well.***

We contacted every school in the borough, and made successful contact with all of the state schools and several private schools in the area.

Each school was asked to bring a representative sample of students, and the success of this strategy is reflected in the demographics who attended. The attendees who chose to give us demographic data were 75 per cent female, and 68 per cent were from a background other than White British, reflecting the 56 per cent of the London population who are not White British.

In practice, only two of the four state schools in the borough could attend. When a school needed to drop out, we sought their feedback, so that we could avoid this in future.

Evaluation

“It’s sadly too busy at this point in the year for us to attend.”

Teacher

“It’s very rare for us to get all our reply slips back and names confirmed for an evening event more than two weeks in advance”

Teacher

We will act on this feedback in future and set more forgiving deadlines – allowing teachers to confirm with a rough number of attendees, and only ask for student names a week in advance. The timing of the event in the school year was selected with feedback from schools, but we will ensure that alternative timings are available for those who cannot attend. I’m happy to announce that we have already arranged a follow up visit in February for one of these schools that could not attend.

Attendance at the open evening was 67 students, with 76 visitors in total, including teachers. This is slightly less than we hoped, largely due to students dropping out on the day. In future, we will experiment with allowing for a slight overbooking – although we will ensure that numbers invited do not go over the safe maximum attendance of the rooms available.

3. We will work with a mix of the ICR’s scientists to make sure our content is scientifically accurate, and the ICR staff and scientists taking part in careers talks will represent areas of the ICR’s research which bring many areas of science together.

We represented many areas of ICR science in our tours by involving all three research divisions based in Chelsea– Structural Biology, Breast Cancer Research and Cancer Biology. All activities were developed with the researchers – or with the specialist in their area, in the case of the activities concerning policy and ICR news.

Careers talks focused on cancer biology, radiotherapy and imaging and biomedical science. In future, we will bear in mind that some of our research activities such as physics and bioinformatics are disproportionately based on other sites, so we should aim for cross-site support for these events if we want to reflect all of our science.

Evaluation

4. We will involve a designer to help ensure our activities and visual aids for the evening are engaging and to unify the visual look. Our resources developed will be able to be used again at future events.

We designed and printed two A1 posters that will be used in future events. To ensure a unified visual look we made use of branded banners, tablecloths, and direction signs, and also gave every attendee a copy of *Your Career in Cancer Research*, our careers booklet supported by the Biochemical Society.

5. We will produce a full evaluation report, with action points for future events. We will ask each attendee to fill out an anonymous evaluation form. We will also seek feedback from staff and volunteers at the event.

We asked all attendees and volunteers for feedback, providing an anonymous form for the visiting students. The form was developed using best practice from the Equality Challenge Unit and from the ICR's Equality, Diversity and Inclusion Manager. We received 65 responses to the student evaluation form. This document acts as the evaluation report of the event.

6. We will keep in contact with the schools who attend, invite them to future events, and seek their feedback on how we can best engage with them.

This process is already underway. For example we updated the schools when the labs that they visited have appeared in the news, and have invited them to take part in future events like school competitions. We are additionally maintaining contact with the schools that were not able to attend, and including them in invitations for future events.

Evaluation

Agenda of the evening

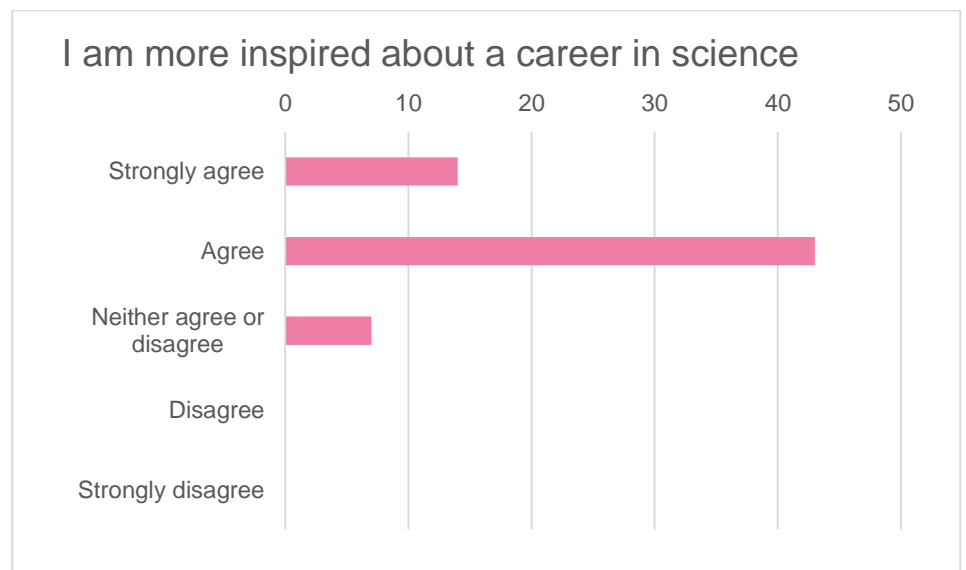
- 3.45 - Students and visitors arrive and check in.
- 4.00 – Health and Safety introduction
- 4.10- Students split into four teams, two go to lab tours and two go to interactive activities
- 5.15 –Activity teams swap with lab tour teams.
- 6.20 – Teams return to lecture theatre for evaluations
- 6.45 – Sign students and visitors out



Students discuss ICR research with Dr Sam Dick

Attendee feedback – Students and Teachers

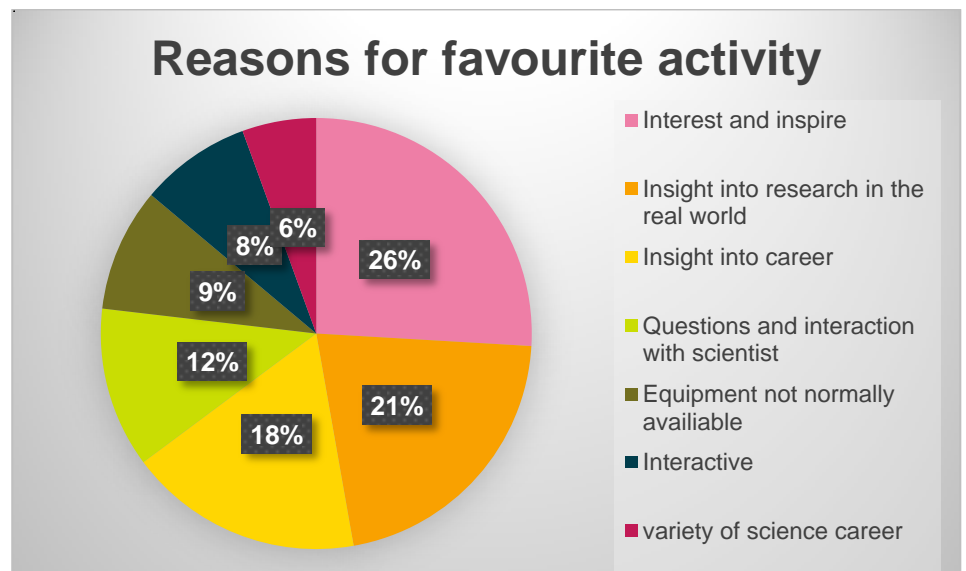
Most feedback from student attendees focused on the inspirational nature of the evening. When asking if students were now more inspired about a career in science, with 89% of students saying they agree or strongly agree that they are more inspired about science careers.



Evaluation

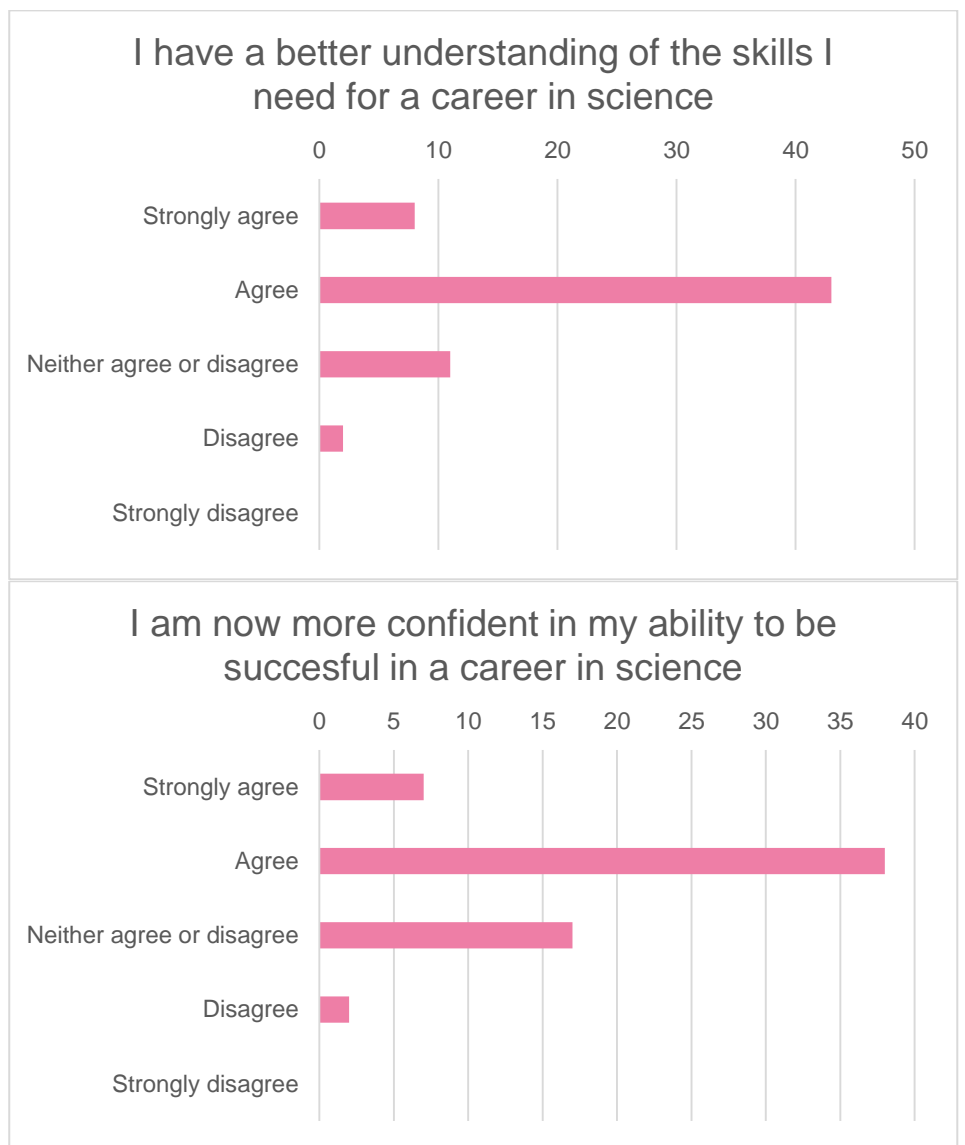
When asked about their favourite activity, 48 per cent of attendees selected the lab tours, with 26 percent selecting practical activities and 26 per cent selecting the chance to talk to people about their careers.

Interest and inspiration, and insight into the real world of research were the most common reasons for a student selecting their favourite activities, with insight into careers coming third.



80 per cent of attendees agreed or strongly agreed that they now had a better understanding of the skills needed for a career in science, and 70 per cent agreed or strongly agreed that they are now more confident about their ability to succeed in a career in science.

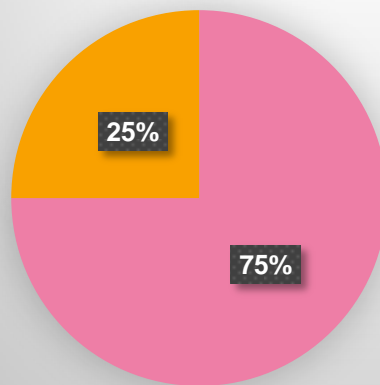
Evaluation



Teacher feedback praised the event, giving scores of five or four out of five for the event being useful to students in future, enjoying the evening and being keen to bring students again.

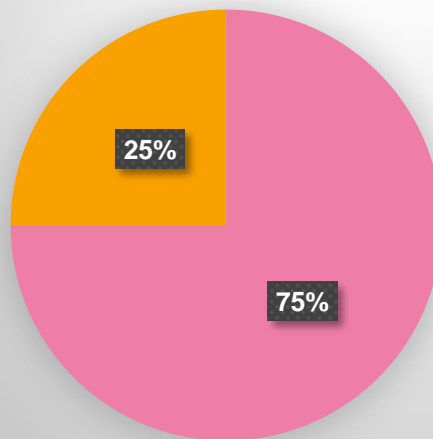
Evaluation

The event will be useful to students in future



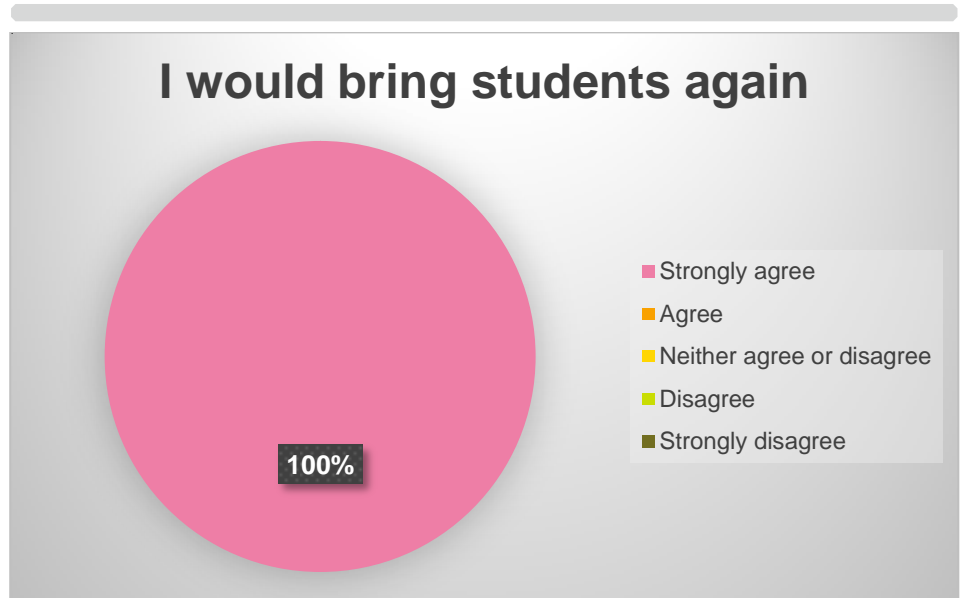
- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

I enjoyed the evening



- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

Evaluation



"We all thought it was perfectly pitched for the group and they definitely enjoyed the labs best and were inspired by how enthusiastic everyone was about their work and how generous they were with their time." Teacher

Specific comments did again suggest the need for more practical advice.

"They felt as though they would have liked more talk focus on careers ... for example how their A-levels are linked to possible pathways."

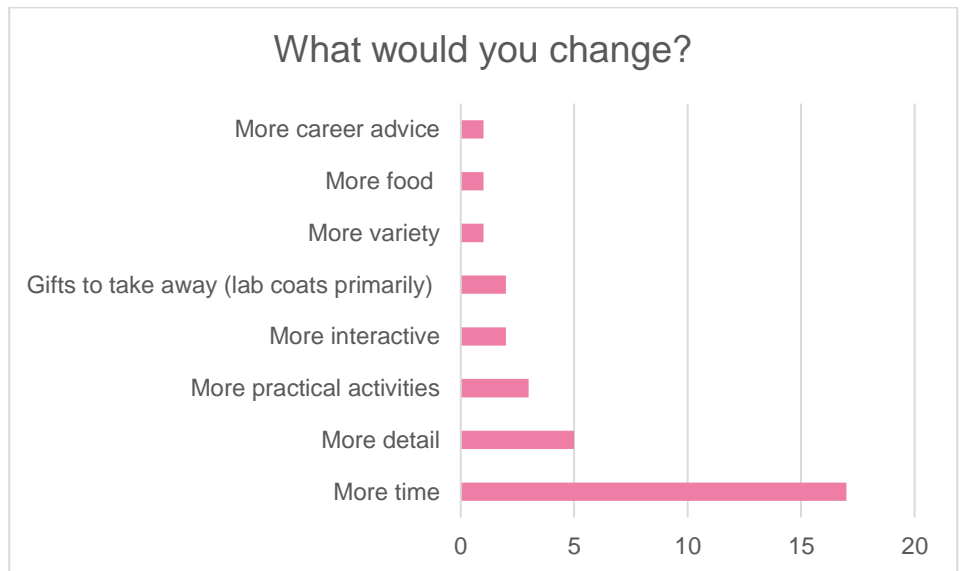
"Would have liked more information on the breadth of disciplines for students to consider in cancer research"

The timing of the event was also felt to be useful, although January was also suggested as a possible good time.

We also asked for suggestions to make the event better. The most common suggestions were all linked to time and the ability to hold longer, more in depth conversations with scientists – with "more time" and "more detail" commonly requested.

In future, we will attempt to provide longer sessions with more interactivity.

Evaluation



Several students also requested more practical career advice.

“I would have like more information on the recommended A-Levels and university courses for particular careers.” Student Attendee

It is worth noting that the careers adviser from the Biochemical Society was in attendance, but people may not have realised as she was on the same stand as the engagement activities. If we had a separate space for all careers advisers then that may have made use of her more.

Evaluation

Volunteer feedback

All feedback indicated that volunteers felt like they knew what to expect from the event beforehand, and had been briefed effectively; that they had enough time to prepare for the event; and That they felt like you knew what they were doing, and had been briefed effectively. Everyone who fed back said that taking part in the event was an enjoyable experience.

More specific feedback praised the meetings before the events (especially for team leaders and lab managers) and agreed that putting the event into people's calendars was a good idea.

Visiting volunteers from the Biochemical Society and Cancer Research UK also gave positive feedback.

Feedback indicated that a more thorough overview of the activities, as well as overall timings, would have been appreciated by all of the volunteers, not just leaders:

“Some of the students didn't really seem to know what the stations were about [before visiting]– perhaps next time we can give them a really quick overview of the stations they'll be visiting?”

A specific issue was with the cloakroom provisions, which took too long and was chaotic – one suggestion here was to use separate meeting rooms in future for each school.

Another member of staff did feed-back that she felt some ICR volunteers may have been setting a bad example by using their phones during the event. Many volunteers were members of the communications team so may well have been updating ICR social media channels, but we should bear in mind that this will not be immediately obvious to an outsider.

Evaluation

Organiser feedback

Overall the organisation was very thorough and we felt well prepared for the event on the day.

The budget was sufficient for the event – we spent slightly more than the grant, but this was to secure reusable resources. A breakdown of the budget is included below:

Outgoings		
	Projected	Actual
Design costs	250	350
Poster printing	250	84
Careers leaflet x80	97.6	97.6
Catering (drinks)	192.5	85
Disposable lab coats	104	118.8
Safety goggles	38	N/A
Reagents for hands on activities and consumables	100	90.33
Room hire	65	0
ICR T-shirts x 10	50	50
Microscope +taxes	0	289
Total	1147.1	1164.73

Evaluation



Students taking part in interactive activity with Dr Vita Fedele

Summary learning points – Content

In the future, we will:

- Share an overview of the stations students would be visiting with Team leaders, making it easier for them to engage immediately with the content.
- Include more practical career advice by having a separate space for careers advisors – and potentially inviting career professionals to speak, present or appear, such as those representing the Brightside/Brilliant Club/Social Mobility Foundation – or inviting the careers representatives from attending schools to share their knowledge with students from other schools.
- Add advice about more accessible routes into science, such as apprenticeships and non-residential university courses.

Summary learning points – Lab tours

In the future, we will:

- Include health and safety, site services and the lab managers on the briefing meeting for team leaders. This should become standard practice for events going forward. Making sure that everyone had the contact details for the labs was also a very positive step.
- Continue to leave travel time between activities, but brief lab managers that their times are purposefully five minutes after the team leader's times, to avoid them worrying.
- Allow more time for lab tours – the labs that were most rushed were offering three separate activities over an hour, so perhaps two in an hour would be more suitable.

Evaluation

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- Make it common practice to invite health and safety, site services and the lab managers on the briefing meeting for team leaders.

Summary learning points – Organisation

In the future, we will:

- Take into account that some schools can find it harder to get permission slips for students, and to organise being away from school in general. Try not to set deadlines too far from the event itself, and consider allowing them leeway to, perhaps, share exact names nearer to the time – it is rare for most schools to confirm attendees more than two weeks in advance.
- Ensure that all emails to schools mention that the event is free to attend.
- Ask schools in emails to send a representative group, as this seemed to work very well.
- Plan school check-in time with more flexibility for arrivals changing at short notice, with space to add names on the log-in sheet and team leader's sheets and a reminder to log the actual attendees afterwards. Sort badges by school rather than by groups for ease of handout.
- Confirm any commitments in writing when organising lab tours, and send diary invitations in good time, to ensure that it is easy to follow-up on commitments.
- Consider how long it will take people to check in and check out of the event, and consider staggering arrival and departures if you have planned anything that will take a long time, like a bag checking system.

Evaluation

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- If a lot of separate-but-similar documents are being created we will have one version of the info that goes to everyone, which is then signed off on and copied and pasted into the separate documents.

Summary learning points –Volunteers

In the future, we will:

- Advise volunteers not to openly use their phones or update social media if they're part of the audience for a talk or lab tour and it is not part of their job- as young people are encouraged to not use their phones in school.
- Ensure that calendar invitations and full briefings for everyone involved in the evening – not just team leaders – are given, and that all volunteers have a full briefing on the timing and content of the evening.