British Science Festival 2009 - Evaluation

The British Science Festival 2009 took place in Surrey from 5 – 10 September 2009 in partnership with the University of Surrey, South East England Development Agency (SEEDA), Guildford Borough Council and Surrey County Council, with substantial support from the Department for Business, Innovation and Skills.

Other supporters and sponsors were:

RCUK
The Royal Academy of Engineering
British Council
Diamond Light Source
Modern Water
Elsevier
ESRC
Living With Environmental Change
Royal Commission for the Exhibition of 1851
The Kavli Prize

Media partners
Surrey Advertiser
BBC Surrey

Following the rebrand of the British Science Association in January, the BA Festival of Science became the British Science Festival.

The core objective of the British Science Festival is to provide Europe's largest platform for scientists to showcase advances in science and engineering and to debate the issues they raise, directly and through the media

The British Science Festival takes place in a different university city each year. It brings together the best in science (including social science), engineering and technology to celebrate scientific advances, explore the latest developments and encourage open discussion about science-related issues that interest and concern large numbers of people, directly and through huge media attention.

The British Science Festival evaluation covers three main areas:

Impact – assessing the effects of the Festival
Demographics – who is taking part in the Festival, both presenting at and attending events
Process – looking at ways to improve how the Festival works for event organisers, speakers and attendees

The evaluation will also consider performance against the key performance indicators as discussed and developed with key partners

Impact

PROVIDE A PLATFORM FOR THE MEDIA TO ACCESS SCIENTISTS ENGAGED IN NEW RESEARCH SO THAT IT CAN BE BROADLY PUBLICISED AND PROMOTED

Over 300 researchers presented their research to the general public, other researchers and the media. Over 200 members of the press registered to access press papers online. There were 23 press conferences during the Festival covering a range of subjects from latest research into osteoporosis to the science of human attraction.

STIMULATE A GREATER INTEREST IN SCIENCE AND ITS IMPACT ON SOCIETY THROUGH MEDIA COVERAGE

Levels of coverage suggest that the topics discussed at the Festival were of greater relevance to a general audience as more newspapers covered them. The number of column inches we achieved with the Festival this year was higher than in the last few years despite the fact that we had fewer national articles than in 2008 indicating that the Festival provided solid stories around which the media could create substantial items.

STIMULATE PUBLIC AND BUSINESS ENGAGEMENT IN ISSUES RELATED TO INNOVATION, CREATIVITY AND EVOLUTION

The key business engagement with the Festival was 'Science about town', a hands-on exhibition for families and the general public. Several businesses located in Surrey and the wider south-east area demonstrated how their business was using innovative techniques to develop their products, from creating more environmentally friendly fuel for wood burners, to showcasing the latest in how technology is used to teach us relaxation techniques, relief from anxiety and how to sleep better.

PROVIDE OPPORTUNITIES AND INCENTIVES FOR SCIENTISTS TO ENGAGE WITH THE PUBLIC AND DISCUSS THE SOCIETAL IMPACT OF THEIR WORK

Over 300 scientists and engineers interacted with a wide range of people. Different event formats allowed different levels of interaction. The hands-on exhibitions were visited by thousands of people who were able to talk one-to-one with researchers developing new technologies, discover more about cutting-edge techniques in nanotechnology and experience what it is like to explore the depths of the ocean in the Deep Sea Serpent. Researchers from the University of Surrey also offered the people of Guildford a nutritional MOT. Feedback from the presenters taking part in the hands-on activities was overwhelmingly positive. They had been impressed by the level of interest shown in their research and the level of understanding displayed by people who had no science background.

The' perspectives' exhibition, organised by the British Science Association's Science in Society team, was a popular component of the Festival both in the town centre shopping centre at the weekend and on the University of Surrey campus during the week. This exhibition brings the public into direct contact with researchers to learn about the societal applications of their research. One researcher who took part said

"I had a really great time and met lots of great people. I also learned a lot about how people see my research, which sounds obvious, but as I discovered, really isn't."

Researchers and artists came together in unusual ways to demonstrate applications of new technology such as exploring applications of ion beams through the medium of dance in 'Particles in space'. A variety of plays including one about Darwin, and one about science and religion and performances from comedy to chemistry with cabbage allowed researchers to interact and engage with large numbers of people.

Key debates during the Festival featured future energy supply, the use of technology in healthcare and how we should be educating the scientists and engineers of the future as well as debates about local issues. Comments about the level of debate included

"Very interested audience as this is a local issue of some contention and a major engineering project"

"Audience, from a wide age range, very interactive and eager to ask questions"

"Good debate afterwards - quite a few people got involved"

"I was impressed at the quality and focus of the questions from the audience at the end of my presentation"

PROVIDE SCHOOL CHILDREN WITH THE OPPORTUNITY TO ENGAGE WITH SCIENCE, ENGINEERING AND TECHNOLOGY IN A WAY WHICH IS DIFFERENT TO NORMAL SCHOOL ACTIVITY

A programme of activity for students aged 8-18 took place on the University of Surrey campus. The programme was designed to enrich and improve students' understanding of the science, engineering and technology they learn at school. A mixture of shows and workshops offered a choice of activities ranging from exploring ideas behind artificial intelligence to entering a sun dome to discover what fusion is and how it may be used to make electricity.

"Excellent - a great experience the children gained a lot from it and really enjoyed it"

"Good for children to consolidate the science knowledge they already have"

PROVIDE TEENAGERS WHO ARE CONSIDERING FUTURE CAREER CHOICES WITH THE OPPORTUNITY TO MEET RESEARCHERS AND TO CRITICALLY ENGAGE IN THEIR WORK

Teenagers were given opportunities to meet researchers in various areas of science in events such as the 'Discover biology roadshow' and through 'Science on a soapbox', an interactive drop in activity in which teenagers could engage with young researchers. Teenagers also enjoyed the perspectives exhibition with one teacher from an FE college commenting "The posters were of excellent quality and relevant to them. We discussed some of the more interesting posters in relation to Unit 5 (perceptions) and when a student showed special interest I was able to introduce them to the scientist who actually did the research. Two of them got email addresses from the researchers so they could ask questions later."

"Amazing stuff and what the festival is all about"

"There were a few unexpected learning outcomes from this trip: rapport has increased; team work and decision making was reinforced; inspired by being able to talk to real scientists"

DELIVER A COST EFFECTIVE, HIGH QUALITY FESTIVAL FOR THE CITY OF GUILDFORD AND SURROUNDING AREAS THAT SHOWCASES THE SCIENTIFIC AND TECHNOLOGICAL EXPERTISE WITHIN THE REGION

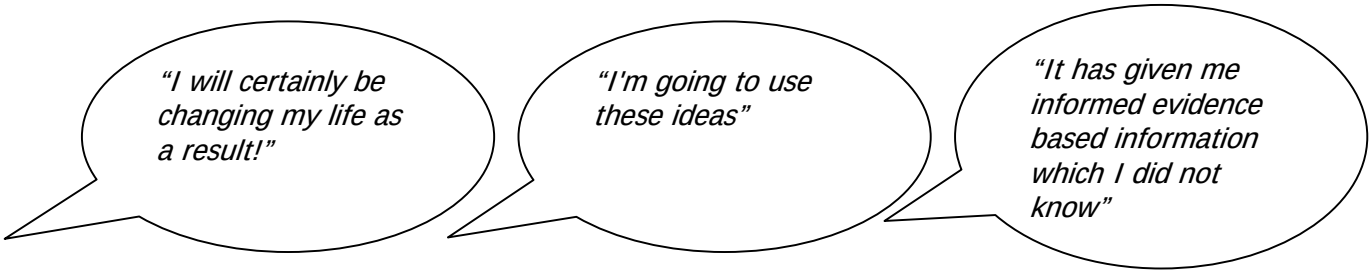
Analysis of audience feedback from the Festival indicates that events were enjoyable, with 87% of respondents rating their enjoyment as excellent or good. Only 4% did not enjoy the events they attended, while 3% of respondents rated the educational/informative nature of the event as poor. 88% said that it was excellent or good. The clarity of the science in the events was rated as excellent or good by 84% of respondents with 5% rating it poor.

45% of events were organised by companies, institutions and organisations from South-East England. Through the inclusion of an extensive programme of events outside Guildford, organisations across the whole of Surrey were given the opportunity to showcase their scientific and technological expertise. Over 15% of the programme took place in venues outside of Guildford, for example in Woking, Leatherhead, Cobham and Camberley. In the majority of cases these events were organised independently and at no cost to the Festival. Mullard Space Science Laboratory opened its doors to let the public find out about the UK's Space research programme; the Princess Royal Barracks at Deepcut demonstrated the science behind bomb disposal and Surrey County Council's Network Management and Information Centre explained how they manage to keep Surrey's traffic on the move using new technology.

Demographic

ENCOURAGE NEW AND DIVERSE AUDIENCES TO TAKE THE OPPORTUNITY TO DISCUSS ISSUES WHICH ARE RELEVANT TO THEIR LIVES, OR TO ENGAGE THEM WITH SCIENCE THROUGH OTHER MEDIA

A third of attendees who completed the evaluation had never been to a science event before and it seems likely that this would rise significantly if more data were available from families attending drop in events during the Festival. Events covered a wide range of topics including adapting to climate change at a local, national and international level; advances in healthcare using technology; the science of the credit crunch; new research in areas of health such as osteoporosis and diabetes; and new research on diets and food all of which provided relevant information that people could use in their own lives. Feedback from attendees demonstrated this:



Audience feedback also shows a level of enjoyment among those not necessarily engaged with science, engineering and technology:

"I would like to visit these places again and attend other lectures by these speakers"
"I wish that science was taught like this when I was young. I might have taken up science."

Process

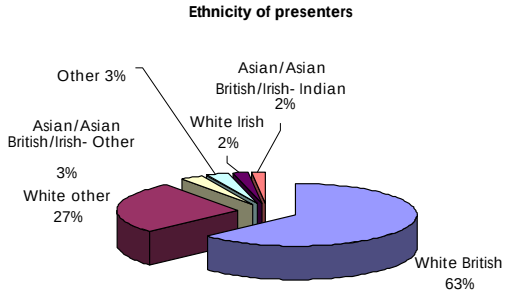
INCORPORATE A RIGOROUS EVALUATION STRATEGY WHICH ALLOWS US TO GAIN GREATER UNDERSTANDING OF FESTIVAL AUDIENCES

Evaluation was done by feedback forms completed by attendees at events. See appendix 1 for details.

Key performance indicators for 2009

TO ENSURE 8% OF FESTIVAL SPEAKERS ARE FROM ETHNICALLY DIVERSE BACKGROUNDS TO REFLECT CONTEMPORARY SOCIETY

Data from the speakers' evaluation shows 10% of speakers were from ethnically diverse backgrounds (ie not white British, white Irish or white other).



Less than 15% of speakers completed the form.

TO ENSURE A DIVERSE RANGE OF SPEAKERS THAT REFLECTS CITY, LOCAL, REGIONAL AND NATIONAL EXPERTISE IN SCIENCE, ENGINEERING AND TECHNOLOGY

In the planning stages of the Festival the following 'sub-themes' were identified by the local steering group as being important both nationally and locally:

The bi-centenary of Charles Darwin's birth

This was fully explored in many areas of the programme including a strand of events supported by the British Council. Thirteen events explored the work of Charles Darwin from an historical perspective, to the impact of his work on other areas of science, to the relevance of Darwinian theory today and in the future. From how and why humans and animals express emotions, to the evolution of human creativity audiences were encouraged to look at evolution in new ways and to consider the impact the theory had, how it is still relevant and to debate the issue of teaching alternative theories and beliefs in school. The Presidential Address, given by Lord May of Oxford, focussed on 'Darwin's unsolved problem'.

2009 International Year of Astronomy

Audiences of all ages and abilities were given the opportunity to engage with space science during International Year of Astronomy, with 13 events about the topic. A successful open day at Mullard Space Science Laboratory saw families engage in workshops and activities. This event was of particular interest to a local audience who do not often have the opportunity to visit the Laboratory. At the other end of the audience scale people with an interest in space science were able to find out how lunar missions are designed using sophisticated new mathematical theory, and how research into novel technologies might radically change the way we send spacecraft to the Moon.

Sustainability

This was a key issue which was highlighted in events throughout the programme. On a personal level events like 'Gardening for wildlife: can suburbia become Britain's largest nature reserve?' which discussed, amongst other things how we can attract vital bees and bugs to our gardens or allotments and how these might be affected by climate change. On a local level, 'Transition town Farnham' debated the issues of how communities might work together to mitigate the effect of climate change and oil scarcity. We also offered tours of local facilities providing renewable energy. Looking at the national picture attendees found out how the UK is working towards providing carbon capture and storage in the North Sea, thereby reducing the impact of burning fossil fuels to provide energy in the future. Looking to sustainability on an international level audiences heard from speakers from government, research and charities who discussed the science of water and sanitation development in the third world, how climate change will affect it and demonstrated the use of water footprints to show our impact on water overseas.

Gaming technology

Although identified as an important area of research in the local region the events in the Festival about gaming technology did not prove hugely popular with audiences. It seems likely that the events in the programme were pitched at too high a level (people who already have knowledge of programming or gaming technology) and had already been run on a number of occasions in the past at the same venue. Events about societal impacts of computing technology such as 'The house that Twitters' and 'Computing - a force for good or evil?' were more popular with audiences and the former was hugely popular with the media.

Food and local produce

A variety of events brought the issue of food production and nutrition to audiences all over Surrey. Denbies Vineyard offered tours and tastings as well as discussion on how climate change would affect the future of the vineyard.

We also discussed some of the latest in nutrition research about the effects of eating too many eggs on our health as well as considering the latest research in flavinoid-rich foods and their effects on our cognitive performance.

These events were complemented by various demonstrations of how to cook foods, what chemical and physical reactions occur when we cook, and nutritional advice. Celebrity chef Anthony Worrall Thompson focused on one particular area of concern- cooking to help prevent prostate cancer which also generated wide media interest.

Haslemere Food Festival hosted 2 events, one focussed on the science of baking and one looking at how to eat fish in a sustainable way.

Leading food policy expert Professor Tim Lang hosted a discussion on 'Choosing our food: how much choice do we have?' which debated whether consumer choice is a myth or a reality and whether or not we can choose foods that will reduce the ecological footprint of our diet.

Most of the Universities in the South-East were represented in the programme with a majority of events from the host University. Middlesex, Reading, Portsmouth, Sussex and Kent Universities also took part.

TO ENSURE BUSINESS PARTICIPATION AND ENGAGEMENT IN THE FESTIVAL AND TO RECORD DATA ON BUSINESS PARTICIPATION FOR USE IN FUTURE FESTIVAL PLANNING

Business participation in the Festival was varied. Speakers in some of the events were drawn from local businesses such as Surrey Space Satellite Technology, IBM and DHL Neutral Services, a carbon consultancy unit established to accelerate the reduction of customer carbon footprints with its UK head office in Berkshire.

Local business also took part in the 'Science about town' weekend activities. These included Poujalat and Surrey Hills Wood Fuel, Mast Carbon International Ltd and Modern Water. Feedback from the weekend was extremely positive and some of the people who took part are keen to do so again in the future. We will collate this feedback to encourage future participation by businesses in other locations as in past years there has been a reluctance to take part in public engagement activities.

SEEDA developed a full day event about tele-healthcare, a key area of research and expertise for the local area. The event and associated exhibition attracted a wide audience.

ENSURE EFFECTIVE BROADCAST MEDIA COVERAGE OF THE FESTIVAL AND AIM TO MAINTAIN AND EXCEED THE 2008 FIGURES

The radio coverage for this year's Festival was particularly extensive and the second highest since evaluations began. We had two stories picked up by the BBC GNS, which achieved massive levels of coverage. 'Honesty Lab', our mass participation activity was picked up twice by GNS, both in the run up to the Festival and once the results had been published. The other event, 'Sleep after 60', proved to be a great discussion point after one of the speakers, Neil Stanley suggested that sharing a bed was bad for your health.

Coverage on television was above average this year although it wasn't nearly as impressive as the 2008 figures. We had BBC News 24 on site at the Festival, however, they had to leave halfway through the filming schedule as another story broke regarding the results of a high profile terrorism trial.

We did however get a good deal of coverage in the USA as the 'Sleep after 60' story was picked up by the syndicated NBC network and broadcast in numerous places across the USA.

A detailed evaluation of all media coverage for the Festival is available from the website www.britishsciencefestival.org

DELIVER 2 OUTREACH EVENTS TO BROADEN PARTICIPATION AMONGST REGIONAL/RURAL RESIDENTS

This year's schools outreach programme was funded by BlackBerry. Through a contact in Surrey County Council, the money was distributed to disadvantaged schools and two SEN (special needs) schools. The money enabled the students to gain free access to the Festival where they were given a timetable of events and

activities. These events included 'Birds of Prey' where the children were introduced to several real life birds and experienced a demonstration of flight. Another event was 'Tricky tomato sauce' which involved experimenting with the consistency of tomato sauce and getting very messy. There was also an activity called 'The bone trail' where the students were able to explore the earth's layers of rock by eating their way through the different sandwich fillings that represented the layers. Both students and teachers had an enjoyable time at the Festival. In total 110 students attended the Festival through the funding from BlackBerry.

"Thanks for organising such a great day for our pupils. The pictures of the birds in flight were great-the adults were certainly involved and having fun"

To engage parents and families we hosted two events at Oakwood School in Horley. Oakwood School is larger than other similar schools and draws its students from a wide range of both socially advantaged and disadvantaged areas. The proportion of students with learning difficulties or disabilities is higher than average. The school is a leading member of the local Horley Learning Partnership and was awarded specialist status for Technology in July 2004. Oakwood School was interested in expanding its reach into the local community. The two events we staged at the school were 'The real science of the circus' and 'The magic of computer science' and attracted almost 120 people from the local area.

AIM TO MAINTAIN AND EXCEED 2007 FIGURES BY ATTRACTING THE FOLLOWING YOUNG PEOPLE IN SCHOOL GROUPS: 3400 FROM KEY STAGES 2 AND 3 AND 1000 KEY STAGE 4 AND 5

Attendance in the schools programme was slightly lower than anticipated because for the majority of schools Monday 7th September was the first day back in school. Many teachers commented on the difficulty of taking children out of school at this time, but were overwhelmingly positive about the experience when they did come. Actual numbers were KS 2 & 3 2510 and KS 4 & 5 596.

INCREASE THE FESTIVAL FOOTFALL BY ACHIEVING AT LEAST 55000
('footfall' refers to refers to the number of interactions with the Festival. Observed or estimated numbers for all non-ticketed events are collated and numbers added together to give audience levels rather than attendee numbers. There is no way of knowing whether these people have visited 1 event/exhibition or 10. Depending on the location of the exhibition estimates are based on published visitor numbers for the venue or observation during a given period)

Festival footfall was estimated to be in the region of 33,000. Some of the activities taking place at established visitor attractions such as Painshill Park and RHS Gardens Wisley attracted far fewer people than we had envisioned impacting on our footfall significantly.

Festival legacy

LEAVE PEOPLE AND ORGANISATIONS IN THE LOCAL AREA WITH THE ENTHUSIASM AND ABILITY TO CONTINUE AND GROW THEIR ENGAGEMENT WITH SCIENCE COMMUNICATION ACTIVITIES

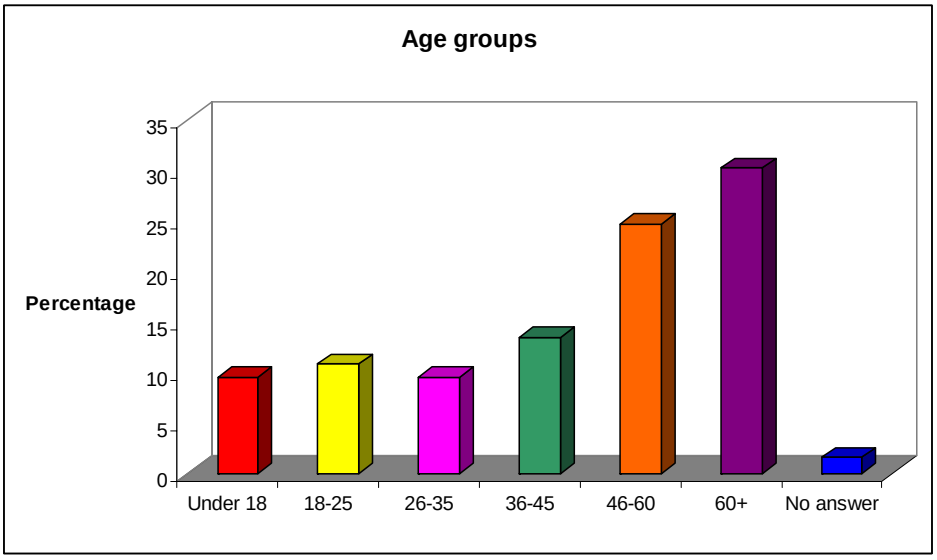
The input of Guildford Borough Council in particular was invaluable and anecdotal feedback indicated that they would be keen to include more public engagement with science activities within their events programme.

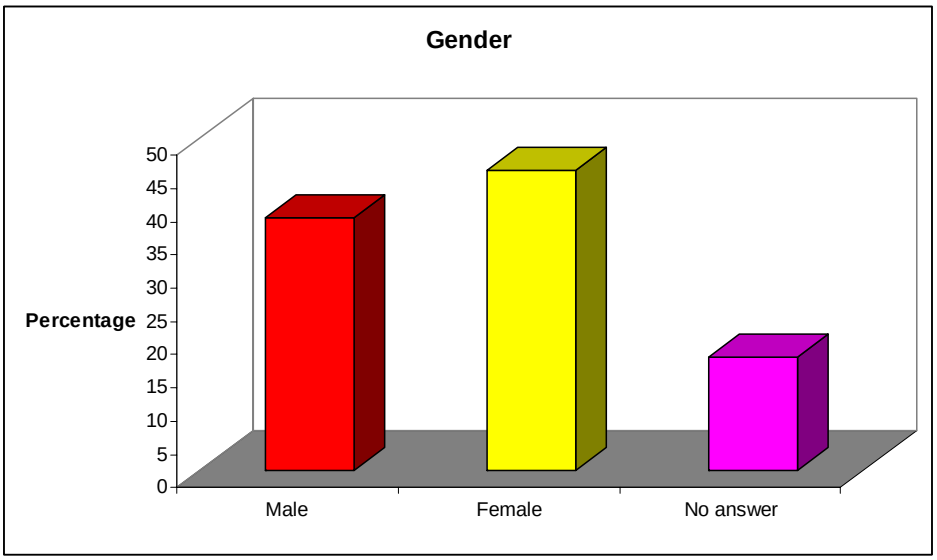
A new branch of the British Science Association was set up immediately after the Festival by a group of students who had worked as Festival Assistants.

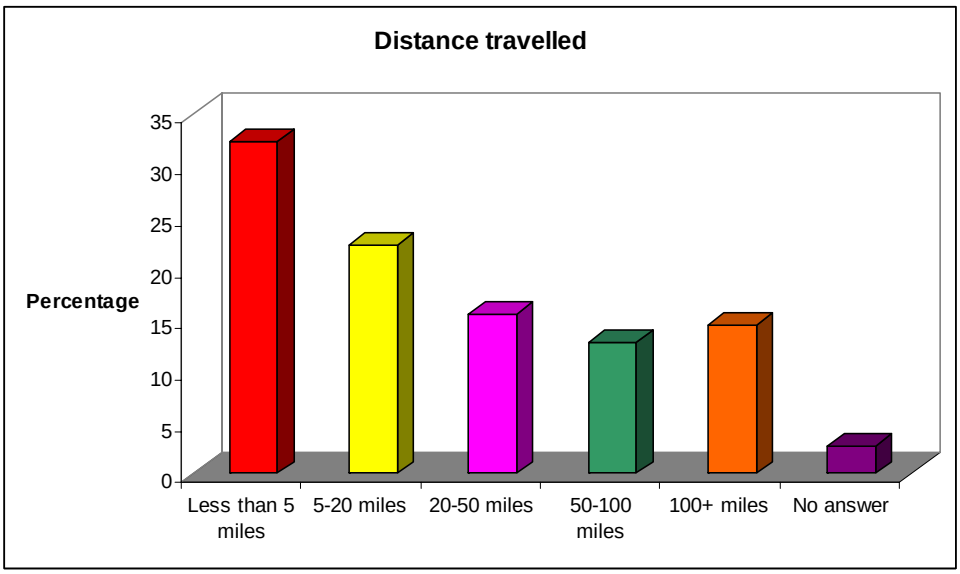
Many of the organisations who took part in 'Science about town' were engaging directly with the public for the first time and, after the success of the weekend were especially keen to take part in more similar activities.

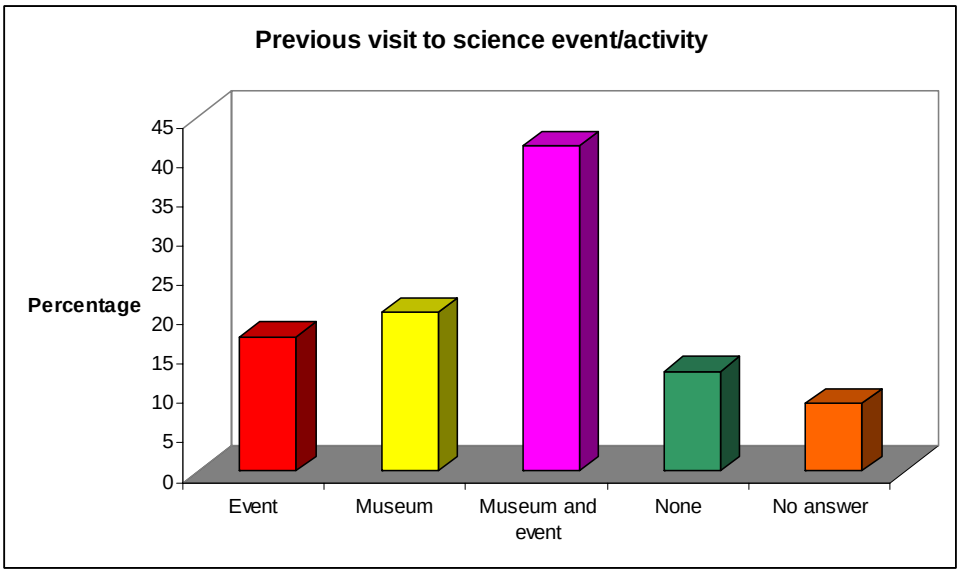
Appendix 1: Attendee Survey

Ethnicity	Percentage
White british	82
White other	8
Asian/Asian British/ Asian Irish	3
Black/ Black British/ Black Irish	1
Chinese	1
Other (including Malay and finnish)	1
No answer	3






Distance travelled
Percentage
35
30
25
20
15
10
5
0
Less than 5 miles
5-20 miles
20-50 miles
50-100 miles
100+ miles
No answer


Previous visit to science event/activity
Percentage
45
40
35
30
25
20
15
10
5
0
Event
Museum
Museum and event
None
No answer

Appendix 2 – Numbers in events

Event Title	No of attendees
Science about town	6000
Brain matters	1500
perspectives	1000
'The Science of Gardening' trail	1000
Explosive Ordnance Disposal (EOD) Display	600
Late summer fayre on the Green	500
perspectives	500
Technology cares	500
An evening with Bill Bryson	420
x-change	400
Nick Arnold - my horrible life	355
Give yourself a nutritional MOT	350
Robert Winston: The man behind the moustache	319
Fleapit presents bad science: when evolution goes wrong	300
Leading Lights Portrait Exhibition	300
Computer pioneers: Ada Lovelace and Alan Turing	250
The magical chemistry show	240
British Science Association Presidential Address: Darwin's unsolved problem	220
Joseph Lister Award Lecture: The new IQ - working memory	210
Da Vinci Inventions: Leonardo and his Machines	200
A Victorian view of science and engineering	192
Physics for life	189
Time Machines	180
Energy from the Surrey Hills: wind and wood?	178
Spaced out!	174
Looking after Granny in the 21st Century	165
The evolution of insulin treatment	155
A guided tour of the darker reaches of the periodic table	153
Singtastic school concert	150
Tour of the Universe	150
Why journalists love stupid equations and other problems in the media	150
Join the Kavli Prize winner	136
CSI: Drug testing and chemistry	135
New ways to produce and store energy: chemistry to the rescue	135
Targeting molecules to treat diseases: innovative chemistry at the coalface	135
Supplements - the good, the bad, and the phoney	125
Chaos in Action	120
Chemistry with cabbage	120
Sleep, body rhythms and psychology: Studies of genes, brains, and behaviour	120
Entering the ecological age: the engineer's role	118
Lord Kelvin Award Lecture: Exploring the dark side of the Universe	111
Honesty Lab	110
The Blue Peter 1 space project	110
The magic of computer science	108

The universe from the bottom up	106
Super sense: The brain science of belief	105
A Physicists guide to dating	100
Aliens! Could Darwin work on the distant worlds of Galileo?	100
Film screening: In the Shadow of the Moon	100
Film screening: Let the Right One In	100
Film screening: Microcosmos	100
Film screening: The Age of Stupid	100
Film screening: The End of the Line	100
Film screening: Young Frankenstein	100
From bacteria to beaks to beaches: the who, what, where, and why of adaptation	100
Galileo, Darwin and the spirit of nature	100
Isambard Kingdom Brunel Award Lecture: Lean, mean and green	100
Mathematics and meltdown: how financial systems collapse	100
Sci-fi weekend screenings	100
Science fact or science fiction: Should peer review stop plagiarism, bias or fraud?	95
Understanding the Financial Crisis	95
Does Darwin have a future?	90
How people and animals express emotions	90
The real science of the circus	87
Fusion research - what can we learn from the Sun?	86
The house that twitters	86
Bone of contention? New thinking on osteoporosis	80
Copernicus and the astronomy of medieval Islam	80
Culture clash: the two cultures 50 years on	80
Festival comedy night - what makes us laugh?	80
Going green with the Strawbridges	80
Light fantastic: an introduction to the night sky	80
Wake up and smell the coffee press launch	80
What computers tell us about the mind	80
Weekly Festival pass	79
Vitamin D: The sunshine superstar. Is it the answer to all our health problems?	78
From flapping birds to space telescopes - the modern science of origami	75
The science of human attraction	75
100 years of nuclear physics	71
Charles Darwin Award Lecture: Primate communication: links to human language?	70
Darwin's theory and the cultural sciences	70
Discovering ancestors: Catalhoyuk and its wider context	70
Fakes, frauds and confabulation in archaeology	70
Sleep after 60: Changes and challenges in later life	68
What's so funny about science?	66
Carbon capture and storage in the North Sea: a national asset in a low carbon future	65
Jam!	61

Antimatter	60
Murder, mystery and microscopes (10.00)	60
Pest wars: Understanding the evolution of pests and diseases	60
Shaken or stirred: Was James Bond right?	60
Three women after the soul of William James	60
Film show: The Age of Stupid	56
Antimatter - facts and fictions	55
Evidence-based cooking for men's health	55
Fly me to the Moon	55
Halstead Lecture: Britain's beastly past	55
Tackling the world's hidden hunger crisis	55
Standing on the shoulders of giants; Celebrating Muslim heritage in our world.	51
Charles Lyell Award Lecture: What rotting animals tell us about the history of life	50
Film Night: Soylent Green	50
Food for thought: Phytochemical rich foods and their effects on brain ageing	50
From bacteria to beaks to beaches: the who, what, where, and why of adaptation	50
Giant shoes to fill	50
Science and faith	50
Science, politics and TV dramas: acquiring political information from entertainment television	50
Sci-fi weekend walks	50
Talking without borders: David Lordkipanidze	50
That's not just cricket - that's science!	50
The art of the dinosauroids	50
The evolution of monsters in the garden of England	50
The great Mars field trip	50
The magic of computer science	50
The origins of human creativity and technological innovation	50
What should we be doing in school science education?	50
Superfluids and supersolids	48
Can your t-shirt predict your health?	45
Computing - a force for good or evil?	45
Dealing with controversial issues in science education: can we? should we?	45
Gaia vs. Goldilocks	45
Innovations in evolution - how life created the Earth as we know it	45
Is brightest best? Sex and signalling in primates and humans	45
Is work good for you? Work, money and families in hard times	45
Murder, mystery and microscopes (6.30)	45
Crime and the credit crunch	40
Explore the possibilities - a career in science	40
Inspiring science with BIS	40
Keeping an eye on development: the role of remote sensing	40
Minibeast safari at Painshill Park	40
Nature's patterns	40
Real life returners - the stories behind the success	40

Technology, space and place	40
Ordnance Survey: Evolving the Map - Map making in the 21st Century	37
England's prehistoric South East	36
Are phosphenes reliable measures of conduction time in the visual system?	35
Concorde: The long view	35
Inspiring women	35
Re:Design - a play by Craig Baxter	35
Stand pipes and hose pipe bans: Water scarcity in South East England - myth or science?	35
The social cure: Why group life is central to our health and well-being	35
Transition Towns: Communities preparing for climate change and peak oil	35
Our creative brains	32
National Science and Engineering Week information session	31
Beyond Live Aid - the science of providing clean drinking water and safe sanitation	30
Drawing with atomic nano-beams	30
Grid computing in the UK: How can it help your research?	30
Is it safe to go to work on an egg?	30
Open forum	30
Out of Charles Lyell's head	30
Protons for breakfast (10.00am)	30
Protons for breakfast (2.00pm)	30
The computer ate my vote	30
The Dragon's Den	30
A3 Hindhead improvement scheme	28
The future starts here - from splitting the atom to rollable TVs	27
Guildford through the ages	25
Protons for breakfast (12.00)	25
Re:Design - a play by Craig Baxter	25
Sizzling Science (10 am)	25
Warning: Garden grabbing costs lives and film screening of Microcosmos	25
Dusk Watch	24
Too hot to handle	23
Course: Rocks on the roll	22
Living with environmental change debate	22
Gardening for wildlife: can suburbia become Britain's largest nature reserve?	21
Alien Adventure	20
Alien adventure	20
Alien adventure	20
Impacts of geology and climate change on British vineyards	20
K'Nex workshop	20
K'Nex workshop	20
Meet the innovators: Designed and built in Guildford - yes we do build satellites in Surrey	20

The physicist Darwins	20
William Wordsworth: literature and culture in the early years of the British Science Association	20
Sizzling Science (12 pm)	19
When science fact meets fiction	18
Sciscreen: Adaptation	16
Wake up and smell the coffee - Public Screenings	16
A climate change walk through RHS garden Wisley	15
Anthropological film: winner of the 2009 RAI prize	15
Caring for Treasure; the mysteries of museum conservation	15
Science Behind the Scenes Afternoon Tour	15
Science behind the scenes morning tour	15
Sizzling Science (3 pm)	15
The science of baking - de-mystified	15
Choosing our food: how much choice do we actually have?	14
Vineyard & Winery tour and talk	14
Careers for girls - speed networking	13
Network management & road safety (11.30-1.00)	13
Choosing our food: how much choice do we have? and film screening of The End of the Line	12
Do try this at home	12
The best ways to cook fresh fish scientifically	12
Tour of renewable energy systems local to Guildford	12
Women doing science: She's an astronomer	12
Environmental Science in Woking	10
Network management & road safety (9.30-11.00)	10
Particles in space: performing science tour 2 (11.15)	10
Surrey Sports Park walk	10
Tour of renewable energy systems local to Guildford	10
Warning: Garden grabbing costs lives	10
Birds Bats and Beasties	9
From bacteria to beaks to beaches: the who, what, where, and why of adaptation	9
Network management & road safety (1.30-3.15)	8
Particles in space: performing science tour 1	8
Save our giants; Build a stag beetle loggery	8
Network management & road safety (3.30-5.00)	7
Particles in space: performing science tour 3	6
Particles in space: performing science tour 6 (12.15)	6
Particles in space: performing science tour 7 (12.30)	6
The tables turned	5
New suburban life forms	3
Particles in space: performing science tour 5 (12.00)	3
Blood suckers: Come closer, if you dare	2
Fibonnaci and the golden ratio	2
Particles in space: performing science tour 4	2

Appendix 3: Numbers attending the Festival

School children	3196
Teachers	326
Speakers	304
Free passes	2434
Organisers	140
Press	100
Tickets sold	8670
Estimated drop-in numbers	17300
TOTAL	**32470**