



The BA Festival of Science took place in York from 9-15 September 2007. The BA worked in partnership with the University of York, Science City York, City of York Council and NYBEP to produce a Festival programme for adults, families and school groups.

The Festival was supported by the following organisations:

The Department for Trade and Industry  
Yorkshire Forward  
RCUK  
BP  
AstraZeneca  
Elsevier  
Diamond Light Source  
The Kavli Foundation  
The Royal Commission for the Exhibition of 1851  
Awards for All  
Euroscience Open Forum (ESOF)  
The Royal Society of Arts

Media Partner:  
The Yorkshire Post

## Aims and Objectives

The BA works towards advancing the public understanding, accessibility and accountability of the sciences and engineering.

The overarching aim of the Festival, and the way in which it contributes to the aims of the BA, is to provide an interdisciplinary platform for organisations engaged with all branches of science, engineering and technology to interact with a wide range of audiences.

The BA Festival of Science evaluation will look at three main areas:

**Impact** – assessing the effects of the Festival

**Demographics** – who is taking part in the Festival, both presenting and attending events

**Process** – looking at ways to improve how the Festival works for event organisers, speakers and attendees

The specific objectives of the Festival 2007 were:

Impact objectives:

- provide a platform for the media to access scientists engaged in new research [See separate media evaluation for full details of press coverage]
- stimulate a greater interest in science and its impact on society through media coverage [See separate media evaluation for full details of press coverage]
- provide opportunities and incentives for scientists to engage with the public and discuss the societal impact of their work
- provide school children with the opportunity to engage with science, engineering and technology in a way which is different to normal school activity
- provide teenagers with the opportunity to meet scientists, and to encourage them to discuss the important issues facing society and look critically at what science can achieve; and to question the ethics behind new research
- deliver a cost effective, high quality Festival of Science for the city of York and surrounding areas that showcases the scientific and technological expertise within the region

Demographic objectives:

- encourage new and diverse audiences to attend events and take the opportunity to discuss issues which are relevant to their lives, or to engage them with science through other media (sci-art, comedy etc)

Process objectives:

- incorporate a rigorous evaluation strategy which allows us to gain greater understanding of Festival audiences

## How did the Festival seek to achieve these objectives?

- *Provide a platform for the media to access scientists engaged in new research*
- *Stimulate a greater interest in science and its impact on society through media coverage*

**In order to meet these objectives we set the following key performance indicators:**

### ***Maintain broadcast media coverage of the Festival (in relation to 2006 figures)***

Radio coverage was significantly increased from 64 national and international items in 2006 to 89 this year. Regional news broadcasts rose from 60 to 80 items.

TV coverage however was down regionally and nationally (12 down from 23 national items in 2006 and 4 down from 9 regional items). However international TV coverage rose from no items last year to 5 this year.

For full details of media coverage and press activity during the Festival please see the separate media evaluation of the Festival.

- *Provide opportunities and incentives for scientists to engage with the public and discuss the societal impact of their work*

**In order to meet these objectives we set the following key performance indicators:**

### **Deliver 2 outreach events in rural communities in Yorkshire.**

Following further research and discussion with local organisations we decided that an appropriate way of getting people outside the immediate area of York to participate in the Festival would be to enable them to attend an event which was already taking place during the Festival. We received funding from Awards for All which allowed us to provide transport and refreshments for people to attend the Festival on Saturday 15 September. The plan for the day allowed them to visit the hands on events in a marquee in the centre of York and visit the ColourDome installation. The people attending were provided with a buffet lunch and a science show in the Friargate Theatre. The day was aimed at families and a total of 91 people attended.

To ensure that the people who came were from groups who would not ordinarily attend we contacted the following organisations:

York Community Volunteer Service  
Ryedale Voluntary Action  
Ripon Community Volunteer Service

Harrogate and Area Community Volunteer Service  
Future Prospects  
Carers' Resource (Harrogate)  
Trax Underground  
NCH  
SureStart  
North Yorkshire Children's Centres

Most of the people who attended did so through North Yorkshire Children's Centres (parental support services), through NCH and SureStart. People came from Scarborough, Bridlington, Hull and Harrogate.

### **Achieve a Festival footfall of at least 50,000**

A total so far of 54410. We are still waiting for details of numbers in 8 events.

### **Achieve ticket sales of 5000**

3778 tickets sold by the BA  
4054 tickets sold by other organisations  
6092 event attendances by people with passes  
Therefore 13868 attendances at ticketed events

2640 people had daily or weekly passes (includes University of York staff and students, presenters, and Press)

Through a broad range of events including talks, panel discussions, debates, film showings, fieldtrips, exhibitions, demonstrations and quizzes the Festival appealed to a wide ranging audience, and provided opportunities for scientists and science communicators to engage with the audience in many different ways. For example the Daphne Jackson Trust offered a unique and informal way for members of the public to meet and talk to scientists and science communicators, through their event 'speed networking on the Big Wheel'.

In 'Personality: what makes you the way you are?' participants in an online personality survey run by the BA in the run up to the Festival were given the opportunity to participate then find out about the results of the survey they had taken part in, and question the psychologist behind the research, Professor Daniel Nettle.

Youngsters were encouraged to participate in 'Download' - an interactive event giving the chance to find out all about digital media, meet the experts and have a go at making music and digital art. The results of what had been created during the week at 'Download' were then showcased during 'Upload', a special concert and display featuring local bands as well as VJs and DJs from the 'Download' event.

The breadth of subjects under discussion during the Festival also meant that there would be something of interest to a range of different groups and sectors. Topical subjects included the problems and opportunities of immigration in 'Migration: Britain at the crossroads'; the energy crisis in 'How science helps UK renewables', 'Keeping the lights on: are we doing enough?' and 'Nuclear Swords into energy ploughshares' amongst others. The Festival also offered the opportunity to look at areas as diverse as anthropological and sociological research into the role of family in influencing children's behaviour to the impact the world largest physics experiment (the Large Hadron Collider) will have on our understanding of the Universe and our place within it.

Celebrated scientists including Professor Robert Winston, Professor Jim Al-Khalili, Professor Chris Rapley and Professor Tim O' Riordan featured throughout the programme, as did media personalities such as Nick Arnold and Frank Close and respected commentators such as Sue Nelson, as well as US Supreme Court Judge, Justice Breyer, helping to raise the profile of the Festival.

There were 87 events on the university campus and 84 throughout the city. Some exhibitions provided several individual exhibits or interactive activities.

One element of the programme which actively and purposefully encourages scientists to engage directly with the public and to think about the societal impact of their work is *perspectives*. This year, 35 finalists were selected from 82 applications to take part in *perspectives*, a poster competition that encourages early-career researchers to explore the social and ethical aspects of their work. After training in conveying these elements of their research to a non-specialist audience, the finalists design their posters and take them to the BA Festival of Science. The winner, Marco Colombo of Edinburgh University, and two runners up, Bronia Arnott of Durham University and Clare Chandler of the London School of Hygiene and Tropical Medicine, were selected by a panel of expert judges who commented on the high quality of this year's entries. The People's Choice prize was awarded to Sarah Moller of York University, who was selected by popular vote.

Finalists also took part in the young people's programme BAckchat session. After the Festival, the posters were displayed at Science Oxford, where several of the finalist took part in related events.

More information about *perspectives*, including all of the finalists' posters, can be found at [www.the-ba.net/perspectives](http://www.the-ba.net/perspectives)

This year's **x-change** was hosted by journalist and broadcaster Sue Nelson and organised by the Science in Society team alongside a dedicated and talented group of volunteers. Rather than using the old panel and interview format, speakers spoke directly to the audience, often with lots of interaction and questions from the audience. The x-change was attended by 80-100 people each evening, and feedback received from audience members was good. Speakers included all five BA award lecturers, as well as physicist Jim Al-Khalili and space scientist Maggie Aderin-Pocock. The x-change also incorporated the hustings, an opportunity for finalists in the *perspectives* poster competition to promote their posters. Entertaining demonstrations were provided by EPSRC's NOISEmakers, who covered subjects from home-made volcanoes to the perfect pint.

Reports from the event, written by the five volunteers, can be found at [www.the-ba.net/x-change](http://www.the-ba.net/x-change)

**Significant focus on energy and climate change issues over the next 2 years, linked to Presidential interests, with effective visibility via the website and expression through the Festival of Science and National Science and Engineering Week**

Energy and climate change provided the focus for the Presidential Address and the Presidential Agenda which featured Professor Chris Rapley and Professor Tim O'Riordan. Within the programme 12 events looked at the effects of climate change and energy

production and several of the exhibitions in the marquees during the week focused on personal responsibility in reducing CO2 emissions.

- *Provide school children with the opportunity to engage with science, engineering and technology in a way which is different to normal school activity*

### **Attract the following young people in school groups:**

#### **3000 Key Stage 2 and 500 Key Stage 3**

Actual numbers: 3351 students and 396 accompanying adults from 99 schools.

Please note: as Key stage was not always recorded, and groups were often mixed it is difficult to say how many children of each Key Stage attended. The figure given is for both key stages.

Over 50 workshops and science shows made up the programme for Key Stages 2 and 3.

- *Provide teenagers with the opportunity to meet scientists, and to encourage them to discuss the important issues facing society and look critically at what science can achieve; and to question the ethics behind new research*

#### **700 Key Stage 4, 400 Key Stage 5**

Actual numbers: 775 students attend over the four days, representing 29 schools and 4 individual bookings from home educators or families

The 2007 programme for 14-19 year olds at the BA Festival of Science ran from Tuesday 11<sup>th</sup> September to Friday 14<sup>th</sup> September and included 35 events put on especially for this age range alongside selected events from the main Festival Programme.

BAckchat, a BA initiative which allows students to enter into facilitated discussion and debate with scientists from the main programme, was held at lunchtime, between 12:00 and 13:30 on Tuesday, Wednesday and Thursday of the Festival. The topics covered were medical science, sustainable energy and psychology. 30 to 50 students attended each session. 60% of students felt there was a good level of discussion and 68% found it very enjoyable. Of all the students, 80% found it informative to some degree (47% found it to be extremely informative) with no student feeling that they had not learned from the experience.

The students found interacting with the speakers and facilitators easy and enjoyable with them commenting that: 'The people sat at the tables with you are very friendly and entertaining', 'Very informative' and 'I think all the speakers were helpful and answered questions.'

The teachers' comments were also mainly positive with one school ticking the extremely category for all the questions asked. All schools said that subjects covered were 'very' or 'extremely' appropriate. All schools felt that the session had valuable content ranging between 'fairly' and 'extremely'.

- deliver a cost effective, high quality Festival of Science for the city of York and surrounding areas that showcases the scientific and technological expertise within the region

Approximately  $\frac{1}{4}$  of all presenters in the campus programme were from local Universities and organisations, with most being from York but a proportion also came from other Universities such as Leeds, Sheffield and Hull. Other local organisations represented in the programme included Kirklees Metropolitan Council, Yorkshire Water, Central Science Laboratory, and the National Non Food Science Crops Centre. Over 85% of events in the city were organised by local organisations including York Neuroimaging Centre, Science City York, Yorkshire Wildlife Trust, Hull Geological Society and York Minster and the University of York JEOL Nanocentre.

## Demographic Objectives

- o encourage new and diverse audiences to attend events and take the opportunity to discuss issues which are relevant to their lives, or to engage them with science through other media (sci-art, comedy etc)

### **Increase the ethnic diversity of Festival speakers so that they represent positive role models for young people and are more reflective of contemporary society.**

Taking the regional data for ethnic minorities in the Yorkshire region as published by Yorkshire Forward we set a target of 8% BME participation in the Festival. Actual figures were 8% of attendees and 3% of presenters. However if we include non-British white groups this rises to 17% of attendees and 19% of presenters. One event during the Festival focused specifically on the contribution of ethnic minorities to science [Is science culture?...A lesson from the past, organised by the Foundation for Science, Technology and Civilisation]

The area directly surrounding York is not particularly ethnically diverse. Ideally more resources would have been available to carry out sustained promotional activities in areas of Yorkshire which are more ethnically diverse. For the first time copies of the programme were distributed to a wide variety of outlets around the extended area of the Festival in this case Leeds, Bradford, Halifax, Doncaster and Castlefield. To build on this, more targeted marketing campaigns will be orchestrated in the future.

Just over 11% of attendee respondents and 7% of presenters refused to answer the question about their ethnic background. Research and anecdotal evidence points to the fact that in some cases BME groups are reluctant to fill in questionnaires about their ethnicity, seeing it as irrelevant and merely 'ticking boxes'.

### **Attendees' questionnaire**

<b>Question 3 - What is your ethnic background?</b>	<b>Percentage %</b>
a. White British	<b>70</b>
b. White Irish	<b>2</b>
c. White other	<b>9</b>
d. Mixed - white and black Caribbean	<b>0</b>
e. Mixed - white and black African	<b>0</b>
f. Mixed - white and Asian	<b>0</b>
g. Mixed – other	<b>0</b>
h. Asian/Asian British/Asian Irish – Indian	<b>2</b>
i. Asian/Asian British/Asian Irish – Pakistani	<b>0</b>
j. Asian/Asian British/Asian Irish - Bangladeshi	<b>0</b>
k. Asian/Asian British/Asian Irish – Other	<b>1</b>
l. Black/Black British/Black Irish – Caribbean	<b>0</b>
m. Black/Black British/Black Irish – African	<b>0</b>
n. Black/Black British/Black Irish – Other	<b>0</b>
o. Chinese	<b>3</b>
p. Other - please specify	<b>2</b>
No response	<b>11</b>

### Presenters' questionnaire

Although double the number of evaluation forms were completed by presenters compared to last year, this still only equates to about 10% of all presenters.

<b>3. To which of the ethnic groups listed below do you consider you belong?</b>	<b>Percentage %</b>
White British	<b>72</b>
White Irish	<b>2</b>
White other	<b>16</b>
Asian/Asian British/Irish – Indian	<b>0</b>
Asian/Asian British/Irish – Pakistani	<b>0</b>
Asian/Asian British/Irish – Bangladeshi	<b>0</b>
Asian/Asian British/Irish – Other	<b>0</b>
Chinese	<b>0</b>
Black/Black British/Black Irish – Caribbean	<b>0</b>
Black/Black British/Black Irish – African	<b>0</b>
Black/Black British/Black Irish – Other	<b>0</b>
Mixed - white and black Caribbean	<b>0</b>
Mixed - white and black African	<b>0</b>
Mixed - white and Asian	<b>0</b>
Mixed – other	<b>0</b>
Other (please specify): Arab, Asian/Tamil, Black African, Sri Lankan	<b>3</b>
No response	<b>7</b>

Although only 3% of completed forms were from minority ethnic groups we know, for example, that speakers in the 'Is science culture?...A lesson from the past' event organised by the Foundation for Science, Technology and Civilisation did not submit a feedback form. In the national context 92.5% of people working in SET are white and 7.5% are non-white. Although organisers of events in the Festival, especially the BA Scientific Sections, have been encouraged to think about diversity when putting together their panels of speakers there is evidently more work to be done on this. We intend to offer more practical support to enable them to do this in the future including finding sources of information to help with identifying relevant scientists and engineers to include in their events.

The proportion of women presenters was 28%. This figure is significantly higher than the proportion of women working in SET nationally which is 18.5%

See also P3 for details of outreach activity.

Although not a specific objective the Festival this year included an event for local businesses. More than 100 Yorkshire business leaders received advice from Sahar Hashemi, co-founder of Coffee Republic and Wayne Hemingway, the creative spirit behind British fashion label 'Red or Dead' on how to succeed in business from some of Britain's leading innovators and entrepreneurs at 'Innovation Horizons'.

## **Engage scientists and engineers with all sectors of our society**

There was a disappointing completion rate of the attendee survey with only 260 completed forms, down from 507 in 2006. We surveyed people booking into events online or by telephone only and not people attending drop in events or booking in person at either the local ticket outlet in York or at the BA Box Office during the week of the Festival. In general drop in events would attract a more family orientated audience. 1/3 of all bookings made online or by telephone were people booking weekly passes. The majority of people booking weekly passes were University staff, PhD students and professional science communicators. However 48% of attendances at events on the University campus were people who did not have a pass and are more likely not to have completed the survey. The data from the survey therefore shows only a small, quite specific proportion of the total attendees of the Festival and the following results should be considered in this context.

There was a good cross section of age groups visiting the Festival with 18% under 25, 33% 26-45 and 40% 46 and over. Gender split was also good with 48% male attendees and 42% female. In both cases about 10% of respondents refused to answer.

When asked what level of science the attendee had studied the largest percentage was postgraduate at 39%. This may seem high but probably reflects the fact that many of the online bookings are made by University staff and postgraduate students at the University of York. A similar conclusion can be drawn from the high proportion of people working in academia (33.1%), although the highest proportion (35.8%) did not work in or study an area related to science. Of those (9.6%) who answered that they worked in science, but neither in academia or industry, the areas mentioned included medicine, Parliament, Social Services, international cultural relations and communications.

When asked why they were attending the Festival, half of all respondents said that it was because of a general interest in science. 21.5 percent came for work reasons and 16.5 percent were interested in the specific subject under discussion. 70% of respondents were attending the Festival for the first time.

Statistics from the local ticketing agency suggests a very good proportion of local residents attending events on campus. 73% of tickets sold at the local agency were for campus based events. This is encouraging as traditionally they would attend evening events in the city, but not during the day on campus.

### **The presenters' experience**

When asked about their experience of the Festival and how satisfied they were with their events, results were very promising.

82% of speakers were very satisfied or fairly satisfied with the registration information they were given before the Festival. Some (12%) were not very or not at all satisfied with the general Festival information they received. This could be explained by the fact that the majority of correspondence between the BA and presenters was by email and a significant proportion of presenters did not provide the BA with postal addresses which meant that the printed programme could not be sent out.

When asked about their event, the response was again mostly positive. 79% said that the coherence of the event as a whole exceeded or met their expectations, with 12% having no

expectations. 90% reported that the intellectual and/or scientific quality of the event met or exceeded their expectations whilst a similar number (88%) felt that the quality of the audience discussion met or exceeded their expectations.

On considering the media activity relating to their presentations at the Festival, many of the presenters had no preconceived expectations with almost 20% of respondents relating that they had no expectations about the extent of media coverage and a third of respondents having no expectations of the way the media would handle reporting on their research.

Overall, presenters seemed to regard attending the Festival as worthwhile with 86% saying that they would definitely or probably recommend taking part to a friend or colleague. None of the respondents would not recommend taking part.

The presenters were also asked what they thought the main purpose of the Festival is. 80% of presenters answered that it was for scientists to engage with the public and to promote discussion about science, although some respondents thought that the £5.00 ticket price for some events was a barrier to achieving this. Other answers included 'awareness raising of current issues to which the scientific establishment needs to respond' and talking to the press.

## Process Objectives

- incorporate a rigorous evaluation strategy which allows us to gain greater understanding of Festival audiences

To obtain information about the types of people attending the Festival, people booking online were asked to complete a short questionnaire. About 250 questionnaires were left in venues for the city programme but only 18 were completed and returned. The analysis of this evaluation can be found in 'Demographic objectives' above.

Attendance figures were collected by Festival Assistants and BA staff and officers attending events. Numbers at events at the National Railway Museum were supplied by the museum. Event attendee numbers can be found in Appendix a below.

Presenters were emailed after the Festival and were asked to complete the Feedback form. Information from this evaluation can be found in 'Demographic objectives' and

### **In depth evaluation (available in January 2008)**

People attending events were asked to complete evaluation forms about the events and this was analysed externally. This qualitative analysis looked at the different reasons that people come to events, whether BA supporters think differently about the events than local attendees, and peoples' perceptions of the events. Comments from these forms were noted and form part of the recommendations which can be seen below.

### **Focus and integrate the City and Campus programmes in the Festival of Science**

Over the last 4 years the BA Festival of Science has included events taking place around the host city, as well as the traditional 'core' events on the University campus. This has allowed the reach of the Festival to be massively increased, with thousands of families attending hands-on events and visiting exhibitions. Previously there had been two printed programmes

one of which was more conference style incorporating all events and one which just included events in the city to appeal to a wider audience.

As much of the 'core' programme is very relevant and accessible to the local population it was decided that we would focus and integrate the two programmes to produce a more coherent Festival of Science programme.

The format changed from A4 to A5, information about individual talks was omitted, the 'Useful information' section about campus facilities was omitted as were lists of BA staff, Branches and Sections. The index of organisers and the index of speakers were also removed. Although the topic index was omitted, we did assign symbols to events to indicate themes running through the programme.

A Supplementary programme was sent out to all full week or full day pass holders so that they would still be able to plan their days at the Festival. This was available on campus, but some people missed out on it.

By revolutionising the programme we were able to produce 100,000 programmes (as opposed to 12000 programmes in 2006) and utilise it as a marketing tool. The programmes were distributed to 70,000 households in York and the surrounding area, as well as tourist destinations, libraries, cafes, bars, shops etc in Leeds, Halifax, Doncaster, Castleford, Bradford, Huddersfield, York, Hull, Harrogate, Wetherby and Knaresborough.

Indications from ticket sales seem to show that this proved successful in attracting the local population to some of the events on the campus. Last year for the Festival in Norwich 72% of tickets sold by the local ticket outlet – the Tourist Information Centre – were for events taking place in the city. This year, the opposite was true with 73% of all tickets sold through the city centre location, York Visitor Information Centre, being for events on the campus.

### **Event management system**

For the 2007 Festival the BA implemented a new online event management system which asked event organisers and presenters to submit event information via an online form. This was to allow event managers more control over and access to information about their event. The success of the online system was varied, but in general worked well for both organisers and BA staff, who were able to use the time saved by this system to work on other aspects of the Festival organisation. There do need to be some changes to the system, as well as clarification of instructions on how to use the system. The system will be tweaked and developed for 2008.

### **Recommendations**

From feedback from attendees, presenters and BA staff and officers the following recommendations were made:

- Make the supplementary programme more widely available
- Reintroduce the daily update sheet rather than relying on screens around campus
- Make sure that debate panels are diverse and provide a variety of viewpoints
- Where the city is not easily accessible from the campus, have more evening events on campus
- Make sure that event organisers understand the nature of the audience (general public) and do not simply use lectures/academic slides, lots of graphs and text that attendees can't read

- Ensure that venues in the city selling tickets for events are aware of the other events going on
- Festival Assistants vary in their understanding of the role. More training would be beneficial
- Leave more time between events for people to move between them

### **Did the BA Festival of Science 2007 meet its objectives?**

Due to lower financial support locally than in previous years, some of the planned events and promotional activity could not take place. There was also some curtailment of evaluation activity due to lack of resources. In the main, however, the objectives for the BA Festival of Science 2007 were met. Because a significant proportion of the Festival audience is made up of people visiting drop in or unticketed events, the percentage of attendees who complete any evaluation is small – between 5% and 10%. In order to complete a more wide ranging evaluation the Festival should look at setting aside a significant budget to employ professional evaluators to carry out face to face evaluations at drop in events and events not ticketed by the BA.

The programme for the Festival this year included fewer exhibitions in public spaces like department stores and shopping centres which have massive weekly visitor numbers. This has impacted on the total 'footfall' figure when compared to the Festival in 2006.

## Appendix a

### Event attendances

<i>Event title</i>	<i>Attendance numbers</i>	<i>See below</i>
<b>Marquees in Parliament Street</b>	10,900	**
<b>Communications on the move</b>	10734	**
<b>Science into art - art into science &amp; Glass and stone exhibition</b>	8945	**
<b>Chris Watson's 'The sound of sanctuary'</b>	4,000	**
<b>Willett &amp; Patteson's amazing camera obscura</b>	2,360	**
<b>John Goodricke's papers</b>	1,292	
<b>Film alfresco - 5 shows</b>	1,100	
<b>Upload!</b>	1,000	**
Horrible Science with Nick Arnold	853	
Marquees in St Sampsons Square	700	**
The x-change (Mon-Thurs)	350	
Professor Robert Winston - the man, the media and making babies	253	
<b>The physics of bungee jumping</b>	250	**
E2 - engineering entertainment	250	**
Understanding the Universe's biggest mysteries	200	
Fusion energy: star power	180	
The BA Joseph Lister Award Lecture - Identity and mistaken identity: face recognition in a surveillance society	180	
The delights of chemistry	177	*
<b>Beatrice de Cardi lecture: 'Archaeology and artifice: the office of works and the fabrication of medieval history'</b>	160	
<b>Paradise lost? Scientific and religious perspectives on the ecological crisis</b>	155	
The BA Isambard Kingdom Brunel Award Lecture - Why do earthquakes become disasters and what are engineers doing about it?	150	
The BA Lord Kelvin Award Lecture - Does the Universe need humankind? The strange case of intelligent observers in the cosmos	150	
Disappearing selves? Bodies, minds and place	150	*
Science, religion and secularisation	150	*
1831-2007: step back in time	150	
The mystery of consciousness	140	
Can you imagine?	140	
See atoms in action	120	

Bread and milk, genes and language: farming and the origins of Europeans	120	
Innovation horizons	120	
The President's agenda	120	
Chocolate: nice but naughty?	112	
<b>Personality - what makes you the way you are?</b>	108	
Public enemy no.1 or your new best friend? Exploring the fascinating relationships between people and the parasites that live inside us	100	
Achieving gold with engineering	100	
From invention to innovation	100	
Family matters: an evolutionary, economic and demographic perspective on how family circumstances influence children.	100	
Leonhard Euler: the legacy!	100	
Evolution and extinction	100	
Our life-giving star: the flow of energy from the Sun to the Earth	100	
The BA Charles Darwin Award Lecture - The evolution of chick chat: how the study of bird song can help us understand the origins of human speech	100	
Halstead lecture: embryology and evolution	100	
The BA Presidential Address: Energy and human progress	100	
<b>South - Sir Ernest Shackleton's Glorious Epic of the Antarctic</b>	92	
<b>Science pub quiz</b>	84	
Sciencehorizons: How people see the future	80	
Engaging young people with science through practical work both in and out of school	80	
<b>York Minster - tours of the East Front</b>	80	
The BA Charles Lyell Award Lecture - Seasons where the sun don't shine: chasing island hopping shrimps in the abyss	80	
<b>The truth about hypnosis</b>	79	
<b>The bionic ear show and debate</b>	77	
Does God have a future in an age of science?	76	
Universal ethical code for scientists: Q and A with Sir David King	75	
Speed networking on the big wheel	70	
Science and society: what do you understand by society?	70	
The body and the mind: how psychologists help people with chronic illness	70	
What eye movements tell us about the brain and language	70	
<b>The wonder of waders by Stuart Meredith</b>	70	
The future is bright, the future is green!	70	

The economic rules of law	70	
Altering the genome of large animals	70	
Molecular building blocks for a brave new world	70	
Environmental challenges	70	**
Awards for the presentation of heritage research 2007	65	
<b>John Smeaton - the father of the civil engineering profession</b>	64	
<b>The void</b>	62	
Performance enhancement: the good, the bad and the Olympic Gold	60	
Launch of CREST * Investigators	60	
<b>When it pays to co-operate: a biological perspective</b>	60	
<b>York Minster glass and stone reception</b>	60	**
Nano goes green: can nanotechnology benefit the environment?	60	
<b>York Cafe Scientifique: liquid crystals - lip gloss to LCD televisions</b>	52	
Science for a better world: the vision of J.D. Bernal	50	
Pesticides, friend or foe? Who's asking? Examining the science of pesticide safety	50	
To boldly go - 50 years in space	50	
<b>Discover the night sky! 7:30pm</b>	50	*
<b>Discover the night sky! 8:30pm</b>	50	*
<b>Discover the night sky! 9:30pm</b>	50	*
<b>Is space the answer to human progress?</b>	50	
<b>Rock guitar in 11 dimensions: strats, strads and superstrings</b>	50	
<b>Yorkshire historic abbey fieldtrip</b>	50	
Facing up to genetics	50	
How chemistry conserves the past	50	
Virtual human evolution	50	
Geology in the service of society	50	
Nuclear swords into energy ploughshares	50	
Shotguns aimed at fossils: total molecular analysis of ancient samples	50	
Grid Cafe: exploring the next IT generation	50	
<b>Brilliant Noise</b>	46	
<b>The Most Complicated Machine in the Universe</b>	46	
Working together across disciplines: challenges for the natural and social sciences	45	
Developing science activities and materials for schools	45	
<b>Archaeological Science walking tour</b>	45	
Science and Landscape: a sustainable future for Yorkshire?	45	
John Michell - a Yorkshire physicist	45	
<b>Four laws that drive the Universe</b>	44	

<b>John Goodricke lecture by Martin Lunn</b>	43	
Born in York: the early BA and early nineteenth-century science	43	
<b>Askham Bog: Yorkshire's biodiversity hotspot</b>	41	
<b>Chris Watson's 'Midnight at the Oasis' - live</b>	41	
<b>Time out for the brain - part 1</b>	40	
What has geology ever done for us?	40	
Keeping the lights on: are we doing enough?	40	
X-ray vision: exploring the secrets of synchrotron science (part I)	40	
Migration: Britain at the crossroads	40	
How do patients inform the drug discovery process?	40	
Farms as Factories: new opportunities for the development of non-food crops	40	
<b>Science Trail tour - Saturday &amp; Sunday</b>	39	
<b>The ethics of progress</b>	38	
<b>Time out for the brain - part 2</b>	37	
National Science and Engineering Week Information Session	35	
Did monkeys really live in England?	35	
Environmental sustainability: from seas to soils to biofuels	35	
Girls in physics: what works, what next?	35	
The speaking and singing computer - will it ever sound human?	34	
<b>The anti-gravity challenge!</b>	33	
Developing new treatments using animal experiments: separating fact from artefact	33	
<b>English clocks and watches - a tour of the collection</b>	32	
Can schools create good citizens?	30	
Energy and climate change - the regional perspective	30	
<b>Free thinking machines or murderous intellects? Artificial Intelligence under the microscope</b>	29	
Limits to growth	28	
Foetal testosterone and child development	25	
X-ray vision: exploring the secrets of synchrotron science (part II)	25	
Reading and human progress: from laboratory to classroom	24	
<b>Birdwatch round York University Campus - Thursday</b>	23	*
<b>From Noctovision to High Definition: 80 years of Television</b>	23	
EPS prize winner's talk and BPS prize giving: a study of spatial learning and memory in the red-footed tortoise ( <i>Geochelone carbonaria</i> )	23	
<b>Antarctica and Five Antarctic Solitudes</b>	21	

<b>Birdwatch round York University Campus - Tuesday</b>	21	*
<b>Brain waves - 10am</b>	20	*
<b>Brain waves - 12pm</b>	20	*
<b>Brain waves - 2pm</b>	20	*
Media and the Future World	20	
Taxonomy in crisis	20	
Is science culture?... A lesson from the past	20	
<b>Living in an arboretum: it's a bugs life!</b>	19	
Alternative energy - the cutting edge	19	
<b>How mathematics changed my life!</b>	18	
<b>What cliff? Driving blind towards the greenhouse gas limit</b>	16	
<b>VIP Reception and Photographic Exhibition: Women of Outstanding Achievement in SET</b>	15	
<b>Birdwatch round York University Campus - Wednesday</b>	14	
The geology of Swillington Brick Pit, Garforth	13	
<b>Rifle Butts quarry</b>	12	
<b>Bootham School observatory</b>	8	*
<b>Bootham School observatory</b>	8	*
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<b>Bootham School observatory</b>	8	*
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<b>Bootham School observatory</b>	8	*
Hugh Brody's Inside Australia	4	
Biomolecules and British Prehistory		
How science helps UK renewables		
Microworld adventures: a symmetry-approach to viruses		
Psychology in society		
<b>Fingerprints of time and Natural History of the Abbey</b>		
The physics of society		
<b>ColourDome</b>	2000	
<b>Late night science</b>		
<b>Late night science</b>		
<b>Medieval merchants and their Guilds</b>		
Microworld Adventures: The hidden symmetries in viruses		
Hands on fusion		**
perspectives		**
Women of Outstanding Achievement Photographic Exhibition		**
<b>York Observatory Open Days</b>		
<b>Yorkshire Air Museum presents: Barnes Wallis</b>		
<b>Yorkshire Air Museum presents: the Dakota</b>		
<b>Yorkshire Air Museum presents: the Halifax</b>		

**Total number of event visits**

**53470**

**\* indicates event full to capacity**

**\*\* indicates estimated numbers for drop in events**

**Events in Bold are events in the city programme**

The average number of people in a campus event was 72.