

Part 2: Making it happen: running your own event

Part 2 of this resource is designed for teachers, careers advisers or anyone who would like to raise awareness of biomedical science and careers. The Biomedical Horizons project has shown that using hands-on/interactive activities and career role models enhances careers events/activities.

Included in this part are:

- Details of the Biomedical Horizons project and events should you wish to run your own event
- Biomedical activities: practical & discussion – useful as stand alone activities or as part of an event
- Suggestions for ways to use the descriptions of jobs from Part 1
- Useful websites e.g. organisations which could be helpful when organising your own careers activities

The Biomedical Horizons Project



Project background & aims

The impact of Biomedical Sciences on our lives is increasing everyday. However, the number of people entering science careers or studying science at school is reducing. We therefore face a shortage of scientists, people in scientific careers and scientifically literate members of the public. However a survey conducted by the Royal Society (Taking a Leading Role: good practice guide, 2004) suggested that the use of science role models may help to reverse this trend. More than half of scientists and engineers who participated in the survey had been influenced in their choice of career by a visit to a scientist's or an engineer's workplace. The aim of the Biomedical Horizons project is to **raise awareness of biomedical sciences and careers** by engaging secondary school pupils

and the public in **exploration and discussion with practitioners.**

Funded by the Wellcome Trust and delivered by the University of Edinburgh, Biomedical Horizons ran from October 2005 until September 2006.

Achieving the project aims

The project partners set-out to achieve the aim of the project by:

- Holding a series of hands-on, science & careers events;
- Encouraging work experience opportunities;
- Developing this peer-led careers resource.

The events and work experience opportunities relied on establishing partnerships with a range of companies and organisations involved in biomedical science. Contributing organisations participated in one or more of the following ways: providing role models, hosting an interactive stand, offering a work experience.

Hands-on science & careers events

Three 1 day events (free) were held in Edinburgh between March and June 2006. The intended audience for these events was young people (10+), family groups and adults.

The event format consisted of:

Hands-on workshops facilitated by role models from a diverse range of biomedical careers. Three different workshops ran simultaneously



throughout the day. Workshop topics were: Antibiotics, Bioengineering and Developing New Medicines. Workshop time was divided between the practical activity (facilitated by demonstrators) and discussion between the role models and the workshop participants.

Role model interviews conducted during workshops by the participants. This part of the workshop was facilitated by the role models. In small groups, workshop participants were invited to interview a role model about the day-to-day reality of their job and their career pathway. Participants then crafted their own interpretation of what that person did for a job in a way they felt would be appealing to someone their own age – this was presented as a competition.

A drop-in exhibition with interactive stands hosted by companies / organisations. At least 10 stands were hosted by different companies, educational establishments and organisations. The drop-in exhibition aimed to give a broader overview



than the workshops had of biomedical science in society and some of the career possibilities. Stands highlighted the way each organisation was involved with biomedical science and importantly had an interactive element to engage visitors. The people hosting the stands were an integral part of their stand – answering questions about their own career and discussing their field of expertise.

Some participants investigated **work experience opportunities** with contributing organisations. This was done at the Careers Scotland stand in the drop-in exhibition. In total over 500 visitors attended the three days of events. Two events were held for pre-booked parties from secondary schools and FE colleges (2nd March and 16th June 2006) and the third event was open to the general public to drop-in on the day (17th June 2006).

A typical visit for school parties lasted approximately 2 hours and consisted of a 1 hour workshop and approximately 1 hour to explore the drop-in exhibition. For the public day workshops times were rearranged to cater for smaller groups more frequently and many visitors participated in more than one workshop.

Work experience opportunities

Contributing companies and organisations were invited to offer work experiences for senior secondary pupils. Opportunities ranged from **facility tours** (a few hours) for groups of pupils, to **work shadowing** or 1 week **work placements** for one or two pupils. Seven organisations offered one or more opportunities to over 45 senior secondary pupils. Some of these placements have already been completed (see the work experience photo diary in Part 1) but several will not take place until after the end of the project. Careers Scotland are involved with this part of the project, sharing their existing good practise and also acting as a liaison between pupils and the relevant organisations. Establishing this link with Careers Scotland will enable the work experiences to continue after the project has finished and it is hoped that many of the organisations will go on to join Careers Scotland's formal work placement scheme.

A peer-led careers resource

As many as possible of the role models' job descriptions, crafted by the workshop participants, have been collated into this careers resource. Combined with the learning from this project it is hoped this resource will:

- Encourage schools, colleges etc. to run their own, similar events and provide information on the network of resources available;
- Raise awareness and spark discussion about biomedical science, careers and their role in society;
- Highlight to organisations the strengths of such events, providing a format which can be used or adapted.

Project learning Feedback

Typically careers events tend not to be very hands-on or interactive. Biomedical Horizons explored the use of hands-on activities and interactive elements in each stand and workshop as a deliberate tool to engage visitors and encourage discussion about biomedical science and careers. **100 % of the visitors asked found the interactive elements useful and interesting.** One 6th year student expressed a view shared by many contributors and teachers who had participated in more traditional careers events - "**Last careers day I just went round picking up free pens**". Results of the entrance / exit questionnaires also showed:

- An increase in awareness of the importance of Biomedical Science (66% to 95% on 16th June 2006);
- Between a 70% to 100% change of opinion regarding the importance of Biomedical Science;
- Increased awareness of biomedical careers;
- Over 94% of visitors had a positive experience finding the event "interesting", "helpful", "informative", "worthwhile" and "brilliant";
- 96% of contributors said they would consider getting involved in promotion of science / careers events again.

An important aspect of the project aim was to engage visitors and biomedical science practitioners in discussion about the day-to-day reality of different careers and the variety of possible career pathways. This proved to be one of the most popular elements of the events for visitors and contributors alike.



Visitors commented the most useful part of their visit was:

- “learning from experiences of people who are in the workplace.”*
- “Having people actually involved in biomedical science at hand to talk to.”*
- “Finding some definite examples of what people do.”*
- “Talking to people about jobs, getting their views and opinions.”*
- “talking to different people, finding out what they actually do!”*

Contributors enjoyed:

- “Engaging with pupils to advise on career pathways.”*
- “Meeting young people thinking about science and offering an opinion.”*
- “Meeting keen young people that want a career in science.”*

Advertising

When advertising to **schools** the Quality Improvement Officers and Science Development officers within **Education Authorities played a key role**. Most of the Education Authorities informed about the project were happy to actively promote it to schools. The authority approved methods used to circulate information to schools were email circulation via the appropriate Education Authority followed by a postal/leaflet campaign to Principal Science Teachers and school careers advisers. Careers Scotland’s school careers advisers for Edinburgh and the Lothians also distributed leaflets to schools. These methods were successful. For the **public event** the methods of advertising which seemed most successful were: **postcards to schools**, email and poster circulation via **adult education/community learning groups**, distributing **flyers** outside the venue on the day and promotion through existing **young peoples’ programmes**. Methods which did not appear to be successful were: advertising inside buses; posters in libraries/job centres and distributing flyers at other events.

Conclusions and recommendations

- Visitors **engaged well** with the role models in the workshops and with the stands – appreciating the opportunity to speak to people who actually work in biomedical science.
- The **practical element** of the workshops and the **interactive** nature of the stands helped break the ice and **facilitate discussion**.
- Asking workshop participants to write **job descriptions** for the person they interviewed helped **initiate and focus discussion**.
- Clear guidelines for the interviews and job descriptions were required to aid role models in facilitation and ensure a wide age range of students knew what was required of them.
- Role models wanted to maximise use of their time and preferred a defined role in the workshops. This was achieved by giving role models guidelines so they could be responsible for facilitating the discussion part of the workshop and also asking them to participate in the practical activity.
- The majority of visitors appeared very motivated, making full use of the opportunity.
- The Biomedical Horizons events



were successful in achieving the project aims and the project partners strongly recommend including career role models and interactivity in careers awareness events or activities. For further details of the project see the final report on the Biomedical Horizons website available from the beginning of October 2006: <http://horizons.bio.ed.ac.uk/>