

**I'm a Scientist**

**for Gallomanor**

**Evaluation brief**

**February 2010**

## **Background**

Gallomanor provides creative audience-led communication solutions and events to local government and other organisations. We specialise in citizen engagement campaigns and e-democracy.

I'm a Scientist is designed to promote public dialogue with and about science, where school students talk to real scientists online for two weeks. It's in the form of an X Factor style competition between scientists, who compete for a prize of £500 to communicate their work. For two weeks students read about the scientists' work, ask them questions, and engage in live text chats with them. The students vote for the scientist they want to get the money. The scientists with the fewest votes are evicted until only one is left to be crowned the winner. The event is supported by carefully developed and tested resources which develop students' skills and deepen their understanding, while empowering them to make decisions themselves.

Over the past few years many people have realised that science communication is a two-way process and scientists need to engage in a dialogue with wider society. But you can't just say, 'Have a dialogue everyone!'. A necessary precondition is that citizens need access to a basic understanding of the scientific process (rather than science facts), and feel empowered to engage in that dialogue. Partly in response to this, the GCSE science curriculum and others have been updated to focus more on How Science Works, but changing the curriculum is not enough. Teachers still find that there are few resources to help them teach different ideas in a different way and that it's difficult to empower students.

Teachers need help to develop students' ability to debate and discuss science issues and to understand how science works. Students also need confidence and encouragement to feel entitled to enter debates and feel their input is valid. I'm a Scientist is designed to address these issues. It is hoped that this can pave the way for citizen-led, active participation, not just equip people to respond to expert-led consultation processes. The event is based on I'm a Councillor, Get me out of Here! ([www.bigvote.org.uk](http://www.bigvote.org.uk)), a tried and tested youth engagement event for local councils which Gallomanor run for Local Democracy Week.

## **Aims of I'm a Scientist**

I'm a Scientist aims to:

Give teenagers:

- Confidence in using their scientific skills to explore issues and make decisions. Particularly as they are empowered by asking the questions and allocating the prize money;
- Practice at debating and discussing scientific research and issues raised by it;
- A better understanding of How Science Works;
- A feeling that science engagement is 'inclusive' and their opinions are valid and welcome;

- A more realistic and internalised understanding of how decisions about funding science are made and to think about how we allocate finite resources.

Give scientists:

- Practice at discussing their work, thinking about the social and ethical issues and the views of people outside their field.

### **Pilot event**

The Wellcome Trust funded a pilot event of I'm a Scientist that kicked off in June 2008.

In the pilot event 851 students in 27 schools asked 15 scientists 1,288 questions and over 27,000 lines of chat were exchanged. The evaluation found that:

- 31% of students went on the site in their own time, at home, after using it in their science lessons.
- 60% of students surveyed said they felt more confident or much more confident at debating science issues.
- Every single teacher surveyed would use the event again.
- Every single scientist who took part would recommend the event to a colleague.
- Students felt empowered and developed their skills and confidence at debating and discussing science issues.

I'm A Scientist was run again in March 2009, part-funded with a sponsorship grant of £1,000 from the University of Bristol.

### **I'm a Scientist 2010-2011**

In December 2009 Gallomanor were awarded a Wellcome Trust Society Award, which enables us to run I'm a Scientist on a much larger scale over the next two years. In 2010 and 2011 IAS will be run in two waves; first in March and again in June.

The March events will involve at least 25 scientists and 100 classes, the June events will involve 100 scientists and 400 classes. More if further funding is obtained.

We are now seeking to appoint an individual/agency to evaluate these events for us.

### **Evaluation aims**

The evaluation will happen in two stages each year: formative (prior to launch of an I'm a Scientist event) and summative (post-event). It is imperative that the first formative evaluation milestones are achieved before the March and June 2010 launches.

An overall evaluation report will be required for the Wellcome Trust following the June 2011 event.

In addition, we would like to conduct a longitudinal study of our 2008 pilot event.

In order to address these aims we are interested in exploring the following:

**a. Longitudinal study of the pilot**

We wish to evaluate the extent to which:

- The extent to which scientists had been changed through participating in IAS (e.g. by developing new skills, developing confidence, changing their views on public engagement, young people, the science they do, taking part in I'm a Scientist made scientists more inclined to undertake public engagement activities, etc)
- Skills developed and/or levels of future engagement varied between different types of scientists
- New skills were developed by teachers through their participation in the I'm a Scientist pilot
- Participating in the pilot of I'm a Scientist inspired teachers to use a new approach to teaching in the classroom
- Students felt any long-term impacts of I'm a Scientist (e.g. whether students' attitudes towards science changed, they went on to take science A-levels, they continued to feel empowered/confident in the classroom, etc)

**b. Formative evaluation**

The overall evaluation aims for the formative evaluation are to:

- Inform decision-making
- Inform content development
- Capture motivations for participation amongst teachers and scientists
- Create buy-in

**c. Summative evaluation**

The summative evaluation aims to evaluate the success of IAS, specifically:

Scientists

- The extent to which scientists had been changed through participating in IAS (e.g. by developing new skills, developing confidence, changing their views on public engagement, young people, the science they do, etc)
- How successful the recruitment of scientists was, and what, if any were the barriers to recruitment
- Identification of the most successful ways to market IAS to scientists
- Scientists' expectations and the extent to which they were met
- The extent to which scientists expectations were met
- Whether scientists who were changed by the event differed between different types of scientist (e.g. career level, area of science, academic vs industry, etc)

- Whether taking part in IAS has made scientists more inclined to undertake public engagement activities in the future
- What help or support could be given to scientists applying in 2011

#### Teachers

- The extent of IAS's value to students (e.g. whether students' attitudes towards science changed as the event progressed, whether students felt empowered by being able to make decisions relating to science, whether participating in IAS has resulted in more student contributions to discussions in the classroom, etc)
- The extent of IAS's value to teachers
- Whether teachers' were changed by participating in the event, e.g.: their views on How Science Works, views about their students, views on areas of science, developed new skills, used a new approach to teaching in the classroom, etc)
- Whether teachers felt they were supported enough before and during the IAS event
- Whether the content was presented in a useful format
- How useful teachers found the debate kits
- Teachers' expectations and the extent to which they were met
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#### Students

- Whether students' views and attitudes towards science and How Science Works changed as the event progressed
- Whether students felt empowered by being able to make decisions relating to science
- Whether after participating in IAS students feel more confident in asking questions and contributing to discussions in the classroom
- What the biggest impacts of IAS were on students
- The extent to which students were inspired by any scientists/areas of science
- Whether some types of classes (e.g. particular key stages or ability level) benefited more than others from IAS
- (Longitudinal evaluation) whether there were any long-term impacts of IAS on the students involved in the pilot study (e.g. did they continue to feel more positive towards science/went on to take science A-levels, etc)

#### General

- The extent to which IAS has met its remit as a form of public engagement
- Whether IAS provides value for money
- What worked well and not so well
- What the learnings are for the sector and for others running public engagement projects (e.g. the best way to recruit scientists, how students ask more questions in a particular situation, what activities encourage more contributions from shy students, etc)

- The value of taking part in the event for scientists and their organisations (i.e. is it value for money for potential sponsors).

### **Methodology**

Gallomanor will work with the appointed individual/agency to finalise the methodology and we expect evaluators to put forward their own ideas as to how the research questions might best be addressed. At this stage we expect the methodology to require a staged approach, and propose the following:

- Stage 1: Develop a detailed evaluation plan, full-blown methodologies and sampling approach including:
- evaluation tools for longitudinal study
  - a summative evaluation approach to be undertaken with students (possibly Personal Meaning Mapping)
- Stage 2: Work in conjunction with Gallomanor to refine existing summative evaluation survey tools
- Stage 3: Review and refine evaluation tools in preparation for 2011 data collection

### **Expected outputs**

The appointed individual/agency will be expected to provide Gallomanor with an interim report and to produce a full written report. The final report should introduce the context and background to the project, explain the methodology used, set out the findings in detail and make recommendations to inform the future of I'm a Scientist. The final report should include an evaluation of any changes made to IaS between the 2010 and 2011 events, and an analysis of the success of those changes. The final report will be required in draft form so feedback from Gallomanor can be incorporated.

### **Timescales**

<b>Activity</b>	<b>Period</b>
Develop a detailed evaluation plan, full-blown methodologies and sampling approach including <ul style="list-style-type: none"> <li>• evaluation tools for longitudinal study</li> <li>• a summative evaluation approach to be undertaken with students (possibly Personal Meaning Mapping)</li> </ul>	Mar-Apr 2010
Work in conjunction with Gallomanor to refine existing summative evaluation survey tools	Mar-May 2010
Undertake data collection and data analysis for longitudinal study	April-June 2010
Undertake summative evaluation data collection with scientists, teachers and students (for 2010 events)	Jun/Jul 2010
Undertake data analysis and produce interim	Aug/Sep 2010

evaluation report	
Review and refine evaluation tools in preparation for 2011 data collection	Jan 2011
Undertake formative evaluation for 2011 events	Feb 2011
Undertake summative evaluation data collection with scientists, teachers and students (for 2011 events)	Mar/Apr and Jun/Jul 2010
Undertake data analysis and produce draft final evaluation report	Aug-Nov 2011
Produce final evaluation report	End Nov 2011

### **Budget**

The budget for all of the evaluation is £13,000 inclusive of VAT.

### **Submitting proposals**

All proposals must clearly identify how you address all the requirements of this brief. Your proposals should include:

- Proposed approach to the design and sampling/recruitment
- Outputs
- Provisional timetable, including milestones and outputs
- Costs and a payment schedule
- Staff nominated to work on the project and responsibilities (including brief CVs)
- Details of any subcontracted work and the scope of work you will employ for them
- Relevant skills and experience:
  - implementing qualitative evaluation, using a variety of techniques and methodologies
  - securing the trust and respect of partners
  - undertaking evaluation with young people
  - good management and communication skills
  - the capacity to deliver within the timeframe
- Details of the lead contact
- Two references

Proposals (no longer than 4 sides of A4) should be submitted by email to Sophia Collins at [Sophia@gallomanor.com](mailto:Sophia@gallomanor.com) no later than 5pm on 12<sup>th</sup> March 2010.