

BIG Event 2011 – Final Programme

Wednesday, July 20, 2011

12:30 – 1:00

Registration

1:00 – 1:45 – Welcome and Networking

1:45 – 2:15 – Keynote Speaker, Miles Bullough, Aardman Animations

2:30 – 3:30

I saw this, and thought of you

A delicate potpourri of inspiring observations, pearls of wisdom, nuggets of truth, or the plain bizarre. Submit your contribution ahead of time; Ben and Jonathan will pick their favourites and host the procession of speakers during the session. Share an idea, a demo, an observation: anything you've seen that made you think of BIG. All welcome, as long as you can retell the tale in under two minutes.

Jonathan Sanderson

Ben Craven

Unique Learning Environments

Many centres are trying to push the boundaries of traditional exhibition spaces. Come to this session to hear about two case studies: Eureka!'s playful learning environments, Mission: Active Future and Wonder Walk and At-Bristol's open access laboratory Live Lab. We'll share the drivers for undertaking these projects and hold a facilitated discussion to draw out when it's the right time to do something innovative and what value it brings to your organisation.

Gemma Kearsley-Wooller, At-Bristol

Liz Smallman, Eureka!

Amanda Philips, Eureka!

The Bionic Ear Show

A unique interactive show that reveals the complex machinery that lies deep inside the ear, how it helps us hear sounds and music, what causes it to break down, and whether scientists can replace the parts to create an artificial ear. During the show, the presenter builds the world's largest ear on stage – a huge outer ear on one side and a giant brain on the other. In between, interactive demonstrations and models illustrate every stage of the hearing process.

Tobin May, Deafness Research UK

3:30 – 4:00 – Coffee Break

Livlab session. During the break, take a moment to drop in and take part in experiments in At-Bristol's brand new livelab.

Summer Night Sky (At-Bristol Planetarium show, starts at 3:30pm)

It's time to tour the Summer night sky! Sit back in At-Bristol's planetarium for a presenter-led show to discover how to find your way around the cosmos. On the way we'll find coloured stars, black holes, and more galaxies than you'll be able to count!

Duration: 25mins

4:00 – 5:00

Secrets of Stagecraft

Since the dawn of time, man has gathered an audience and put on a show. Interactive STEM demonstration shows are a relatively recent trend. So what can we learn from more established art forms? This practical session will explore skills and experiences found in other related fields such as theatre, circus, stand-up comedy and magic. Come and discover how to exploit this performing wisdom and raise standards in our own industry!

Matt Pritchard, Lab Monkey Productions

Debbie Syrop, Royal Institution

Paul McCrory, Think Differently

Improvisation Workshop

Improvisation skills can be used in performance and any other opportunities you need to think on your feet! Join in this interactive workshop to try out some techniques. *Attendance by pre-registration only.*
Arabella Butler

Express Yourself – Dance and Dialogue

14 Dancers, 6 Drummers and Genetics

Join me as I describe my first foray into science-art collaborations - what worked, what didn't and the challenges I encountered. A pitfalls guide to event planning and a beginners guide to video editing. Learn from my mistakes so you don't have to make 'em! Grab your chance to "Express Yourself" through creative dance in the second half of the session, and see how your creations compare to the films of the teenagers who took part in the actual event. The event was co-hosted by University of Edinburgh, Edinburgh Beltane - Beacon for Public Engagement and Dancebase.

Iona Beange, University of Edinburgh

5:00 – BIG Event Social Event

Join us at the Watershed, just a short walk from At-Bristol, to continue mingling with BIG delegates. Food and drink are available to purchase directly from the venue.

Thursday, July 21, 2011

8:30 – 9:00

Registration – with coffee, tea and mini-danishes for everyone!

9:00 – 10:00

Finding the fun in maths and the maths in fun.

Maths? Hard, cerebral and dull? Puzzles? Fun but a waste of time? Neither has to be true. Find out how hands-on activities can make puzzles mind-engaging and make maths entertaining.

Bubblz Ainslie

Noel Jackson, Centre for Life

Selwyn van Zeller

Play

BIG people love to play, but how do we promote play as part of our science communication activities? At Life we have just opened a new gallery for children under seven. We tried very hard to create a rich environment for play. Has it worked? Break to Play is a new project at Eureka! which enables children with Autism and their families to spend quality time together in their playful galleries. Join us to share experiences and discuss how we can all encourage play as an integral part of science communication.

Lizzie Ellis, Centre for Life

Toni Hamill, Centre for Life

Jenny Dockett, Centre for Life

Liz Smallman, Eureka

Joining the Demo Dots

We all like to get as many exciting flashy demos into a show as possible, but what goes in between? Nothing and it is disjointed, and too much talking makes it boring, so we need other, interesting and/or conceptually enlightening, demos to carry the story and the ideas from one to the next. Have a go at joining some dots yourself.

Dave Ansell

10:15 – 11:15

Can we make this?

Hands-on has always been at the heart of science communication, but lately more people seem to be getting their hands dirty. Are we on the cusp of a 'Maker' renaissance? Can we let even young children 'make it large' with adult sized makes? How best can we inspire a generation of makers and doers not just consumers and watchers? Come on out of that closet shed and pass the sticky tape, we're going in.

Jonathan Sanderson, Director of StoryCog and fugitive of 'make and do' TV.

Torben Steeg, fresh from running the LA based Science and Technology Centre, looking to set up a UK based 'MakerGym'.

Ian Simmons, Centre for Life, waxing lyrical about Maker Faire and tinkering.

Festivals and nightclubs – opportunities for science communication?

From festivals to nightclubs science communication activities are appearing in many different venues. Hear from three speakers with very different experiences as they identify the highs and lows of taking science to non-science venues. Margarida will present findings from her research looking at science activities at Latitude festival, Alison will share her experiences of being part of the Knit a Neuron project at the Green Man festival and we'll also hear about what it's like to take part in the science variety night, Bright Club.

Margarida Sardo, Science Communication Unit, UWE

Alison Brindle, University College London

Helen Featherstone, Science Communication Unit, UWE

Chiara Ambrosio, University College London

Mr. Brunel's Bloomers

Isambard Brunel is the favourite son Bristol never had. He was born in Portsmouth and was based in London all his working life. Despite his deep connection with a number of Bristol based projects he was never a citizen of this fair city, but you'd not guess that from the depth of the Brunel cult here in the West Country. Brunel was undoubtedly one of the foremost engineers of his generation, but he was most definitely NOT the towering genius that the likes of Jeremy Clarkson believe him to have been. Indeed he was responsible for a number of large and expensive failures, any of which would have ended the career of a less self-confident man. This show examines the life and work of Mr Brunel, the Tony Blair of Victorian Engineering, through the critical lens of some of his most spectacular cock-ups, including the County Bridge fiasco, the awful atmospheric railway, and the tragi-comedy of the ss Great Eastern, whose launching bankrupted her owners before she'd ever set sail.

Presented by Richard Ellam, with a fascinating collection of props and models, and an enormous top hat!

11:15 – 11:45 – Coffee Break

Livlab session. During the break, take a moment to drop in and take part in experiments in At-Bristol's brand new livelab.

Tour of At-Bristol's Innovative Low-Energy Building Technologies

Come and see the future of building technology and go behind the scenes at one of the UK's most unique and advanced low-energy installations. One of the things that makes At-Bristol so special is the innovative technologies that regulate the environment of this iconic building. We have the country's only working phase change storage tank which, along with renewable air source heat pumps, thermal wheels and green roofs, are part of At-Bristol's cutting-edge environmentally friendly design. Join Chris Dunford for a back-room tour of this revolutionary equipment and the science behind it. We guarantee this is something you won't find anywhere else! (Meet at the front desk)

Chris Dunford, Sustainability Officer, At-Bristol

11:45 – 12:45

Using STEM businesses to inspire in school activities for secondary schools

Last year Science Oxford was involved in the e4P project along with other regional providers. This involved, among other things, developing four activities suitable for KS3 students that were based on science used by local companies. The result was four very different activities: a debate, an interactive show, and two workshops (one very open ended, one not). As is often the case, the constraints of the project helped encourage creativity and we were surprised by the companies that inspired the most popular sessions. Attendees will also get a chance to try out some of the activities.

Natalie Ford, Science Oxford

Science Clubs: Engaging young people 6 – 16yrs

What makes science clubs different to the usual offers in Science Centres? Join us in a hands-on session to explore what we offer in the LIFE Science Clubs. The continued interaction with young people over an extended period of time is a very different experience to our usual science engagement. The session will explore activities we have used with children and programmes we have run for teenagers. There will be plenty of opportunities to share experiences and quiz us about what has worked and what hasn't. We hope that participants will be inspired to start their own science clubs.

Noel Jackson, Head of Education, Centre for Life

Toni Hamill, Public Engagement Officer, Centre for Life

Music Explained

Guitar physicist Dr Mark Lewney takes you on a tour of the science of music, from the vibrations of the instrument itself it to their detection at the ear and on to the complex processing of those signals in the brain. Take part in audience listening tests, hear Mark play his own compositions live, learn the secret of the Stradivarius, and discuss the ultimate question: what, if anything, is music for?

Mark Lewney

12:45 – 2:00 – Lunch and BIG AGM

2:15 – 3:45

Summer Night Sky (At-Bristol Planetarium show, starts at 2:45pm)

It's time to tour the Summer night sky! Sit back in At-Bristol's planetarium for a presenter-led show to discover how to find your way around the cosmos. On the way we'll find coloured stars, black holes, and more galaxies than you'll be able to count!

Duration: 25mins

More from your Voice

Make the most of your demos and shows by finding new ways to approach the same old spiel. Find variety in your voice and make choices that will lift your presentation to the next level. This exploratory workshop will give you the opportunity to experiment with vocal choice and variety and send you away with some tools to spice up your presentation style. *Attendance by pre-registration only.*

Kevin Hollis, Techniquet

New Opportunities: Is Primary Science in Crisis?

Scientific enquiry continues to be the part of the primary science curriculum where teachers often need the most support. Many people had hoped that the removal of science SATS at the end of KS2 would enable primary school teachers to be more creative with their delivery of the science curriculum, especially in relation to scientific enquiry. However the corresponding fall in profile of science in the primary school curriculum, as well as the loss of Local Authority specialist science support in many areas has left many primary school science champions frustrated and others lacking in confidence and support. This situation represents an opportunity for many of us to develop our programmes in response to these needs. In this session Bridget Holligan and KS2/3 teacher and transition specialist Judy Saunders will explore with participants how we can develop the sessions we offer to make stronger links to scientific enquiry and more creative, open ended science investigations. The session will also look at how we can borrow formative assessment (often known as Assessment for Learning or AfL) techniques to enhance the learning potential of our own sessions, both with schools and with other audiences. Bridget and Judy will share some ideas and examples, before allowing participants to consider and discuss how they might develop their own programmes.

Bridget Holligan, Science Oxford

Judy Saunders, Advisory Teacher of Science, Burnham Grammar School

Who are we trying to impress?

Every week, 385,000 people of all ages and backgrounds engage with science at a UK science and discovery centre or science museum. This equates to 20 million people every year, taking the time to explore and delve into science in a hands-on, intriguing and personal way.

Talented and creative staff across the UK offer school children, families and adults unusual and exciting opportunities to explore, discover, question, test and experiment on the world around them.

The aim is not simply to fill people with facts, but to take them on a journey to spark their curiosity; to encourage them to continue asking questions about the world long after they leave our centres.

The goal of this session is to together explore what we can all do better together, and how we might achieve this. To examine what the future holds for science centres and to ask does Government really understand what informal science learning is or what we are trying to achieve?

Penny Fidler, The UK Association for Science and Discovery Centres

3:45 – 4:15 – Coffee Break

Livelab session. During the break, take a moment to drop in and take part in experiments in At-Bristol's brand new livelab.

4:15 – 5:30

Centre 2020

In this session we will plan a new hypothetical science centre, to open around 2020, drawing upon everything the sector knows now about itself. Experienced members of the museum and science centre world will join the conversation and share the insights they have gathered over their collective careers. If you've ever been frustrated by somewhere you've worked or visited, or simply feel that you could do better, this is the session for you!

Chair – Andy Lloyd, Centre for Life

Online engagement: science communication with the cyber-public

It's hard to think of a research organisation, science centre or science-based programme that doesn't have a website. Many scientists and science communicators keep personal blogs, Twitter accounts, Facebook pages or other outcrops of the Web 2.0 world. And now that research projects are beginning to adopt an 'open science' approach, the process and raw data of research are being exposed to public audiences. But who are the audiences for online engagement? What information are they accessing and what are they doing with it? What implications does public interaction with data have for those making the information available? Can open science be part of the dialogue between scientists and members of the public? Some scientists love the challenge of openness, others would like to try it but foresee issues; some find it daunting. This session will include speakers from projects with different approaches to discuss different degrees and qualities of 'openness'.

Ann Grand (PhD student, Science Communication Unit, UWE <http://tinyurl.com/62sqduv>)

Claire Rocks (Bloodhound@university <http://tinyurl.com/69z8qw5>)

Jonathan Sanderson (Bang goes the Theory http://www.bbc.co.uk/bang/ask_yan/)

Richard Grant (Faculty of 1000 <http://f1000.com/>)

Dome Show

An interactive session on all things to do with using and teaching within a dome.

Ben Brown, Explorer Dome

7:00 – 11:00– The annual BIG Event Dinner and Best Demo competition– Jack's Brasserie, Bristol.

Friday, July 22, 2011

8:30 – 9:00

Registration – with coffee, tea and mini-danishes for everyone!

9:00 – 10:00

Extending the Visitor Experience

Our audiences spend a surprisingly short amount of time at our exhibits, in our shows and with our objects. How do we build on this time to extend the visitor experience, what value does it bring and what approach is right for you? Come to this session to hear about different approaches to providing more content, deeper experiences and experiences before/after the event.

Dan will discuss the personalised online content which visitors access through Explore More: the drivers for developing Explore More, the technological implications and how visitors use it. Julie will discuss how Avon Wildlife Trust's new learning strategy is changing the way AWT connects the students' practical experience out at the nature reserve with the programmes of work studied in school. While Rebeca will discuss the use of oral histories to bring objects alive and how digital technology can be used in the grounds of historical sites.

Dan Bird, Exhibitions Director, At-Bristol

Julie Doherty, Learning Development Officer, Avon Wildlife Trust

Rebeca Medrano-Arnaez, Learning Officer, Tyntesfield

Could it be magic?

"The person who did the show was quite good"

See the show which prompted this glowing student feedback...

Inspired by the premise that any sufficiently advanced technology is indistinguishable from magic, "Could it be Magic?" challenges students to think like scientists and magicians to uncover the truth behind illusions. Developed as part of the celebrations for the Royal Society's 350th anniversary, the interactive KS3 show encourages enquiry, using magic tricks to inspire student's imaginative engagement with scientific ideas and technological developments whilst drawing inspiration from heroes of science and engineering to discover the ingredients which help make creative people. Plus time for discussion.

Matt Pritchard, Lab Monkey Productions

Rachel Roberts, SS Great Britain

Communicate with Confidence (9:00 – 10:30)

A special session from guest tutors Vox Coaching, an intensive opportunity to develop your presentation and communication skills. *Attendance by pre-registration only.*

All About Us – Behind the Scenes Tour

All About Us is At-Bristol's new £1.5 million interactive exhibition. Funded by the Wellcome Trust, the All About Us experience has over 50 new hands-on exhibits all about the human body including a real brain and a open-lab on the exhibition floor. Take a guided tour with Exhibitions Manager Emma Cook. Starting from the main desk from 9:00am and 10:00am.

10:00 – 10:30 – Coffee Break

Livellab session. During the break, take a moment to drop in and take part in experiments in At-Bristol's brand new livellab.

Tour of At-Bristol's Innovative Low-Energy Building Technologies

Come and see the future of building technology and go behind the scenes at one of the UK's most unique and advanced low-energy installations. One of the things that makes At-Bristol so special is the innovative technologies that regulate the environment of this iconic building. We have the country's only working phase change storage tank which, along with renewable air source heat pumps, thermal wheels and green roofs, are part of At-Bristol's cutting-edge environmentally friendly design. Join Chris Dunford for a back-room tour of this revolutionary equipment and the science behind it. We guarantee this is something you won't find anywhere else! (Meet at the front desk)

Chris Dunford, Sustainability Officer, At-Bristol

10:30 – 12:00

What can we learn from educational research?

Although much of the activity within BIG occurs within the informal learning sector, there is still plenty that we can learn from research occurring within formal education to apply to our existing practice. This session will introduce recent key relevant findings and how we can apply them within BIG. Three key areas will be discussed:

- What do researchers know about 'interest' and what makes a concept 'interesting' to most people? How can educators increase the interest of learners in particular topics?
- Images of scientists and people who are 'into' science' – finding the roots of how individuals come to see scientists as 'other'.
- The Interest and Recruitment in Science project (IRIS) examines young people's considerations, values and priorities when choosing their course at University - what matters most to students?

In addition, a short outline will be provided as to how you or your colleagues can make the most of existing research opportunities to inform your work directly.

Karen Bultitude, Science Communication Unit at UWE

Paul McCrory, Think Differently

Jen DeWitt, King's College, London

Elaine Regan, King's College, London

Running a Successful Volunteer Programme

This information-sharing session will focus on the best practice in volunteer management. Working in groups, we will discuss and explore ways of recruiting, supporting and retaining volunteers, as well as practical advice on how to set up volunteering programmes. Volunteers will also be on hand to share their experience and perspective.

Jo Bryant, At-Bristol

Michaela Livingstone, Volunteer

Addam Merali-Hosiene, British Science Association

Cathy Sturrock, Science Oxford

Emma Wightman, Science Oxford

Communicate with Confidence (10:30 – 12:00)

A special session from guest tutors Vox Coaching, an intensive opportunity to develop your presentation and communication skills. *Attendance by pre-registration only.*

12:00 – 1:00 – Lunch break

1:00 – 2:00

The Science of Showbiz

There has been a recent trend for commercial theatre productions which use science demonstrations to hook audiences in the competitive entertainment marketplace. How do these projects help to engage the public in science? Can you successfully blend education and entertainment? How can science communicators and the theatre community best collaborate in the future?

We hope to stimulate a constructive and lively discussion about the benefits and challenges of performing live, large-scale science in theatres.

Dan Colman - M4 entertainments (producer of Brainiac Live and Science Museum Live)

Debbie Syrop – Royal Institution

Paul McCrory - think differently

Toby Parkin, Science Museum

Engaging Industry

Through the STEM Ambassadors scheme, Graphic Science works with over 90 companies in the Bristol and Bath area. Working with volunteers from industry, rather than academia or charities, poses its own challenges and opportunities. The session will feature STEM Ambassadors from industry who will talk about their motivations for doing public engagement and the issues they face, as well as showcasing some of the activities they have developed. The session will end with an opportunity to ask questions and share ideas. We will aim to capture some of the learning from the session in the form of top tips for working with industry.

Claire Dimond, Graphic Science

Introduction to Formative Evaluation

Hands up who's run an activity for the very first time with their visitors? Did you learn something vital from your experience? That's where formative evaluation has a role to play in helping you shape your activities before they go live. Come to this practical hands-on session to find out what formative evaluation is, when to use it and how to use it for maximum effect. We'll cover methods and tools for data collection, data analysis and using the findings in the development of your activity. Examples will be provided which cover formative evaluation of a whole exhibition, individual exhibit evaluation and the use of formative evaluation for programming activities.

Ruth Murray, At-Bristol

Andy Cocco, At-Bristol

Helen Featherstone, Visitor Studies Group

Andrew McIntyre, Morris Hargreaves McIntyre

2:00 – 2:30 – Coffee Break

Livlab session. During the break, take a moment to drop in and take part in experiments in At-Bristol's brand new livelab.

2:30 – 3:30

Managing the science: managing the scientists

We all have science as the base for our communications but not all science communicators are practicing researchers any more. With the recent Concordat for Public Engagement, researchers are being challenged to embed communication activities into their research projects. How can the science communication and researcher communities work together to contribute to high quality science communication activities and what value does this add for our visitors and audiences?

Come along to this session to share your experiences of successful relationships. We'll hear from a project which is responding to (and reducing) barriers that researchers experience. We'll also hear how science communicators have managed successful relationships with over 30 researchers during the development of a large exhibition. In this focussed discussion we'll work towards identifying Top Tips for successful relationships with researchers.

Helen Featherstone, UWE

Ruth Murray, At-Bristol

Lucy Moorcraft, University of Edinburgh

Jenny Rodgers, University of Edinburgh
Elizabeth Stevenson, University of Edinburgh

Lab 101 (The Good, The Bad and The Ugly)

Ever had a demo, piece of interpretation or an exhibit that drives you mad? The sci com equivalent of Gillian McKeith, marmite or the songs of Bucks Fizz? Our panel of speakers will have 3 mins to expound on the doom of their chosen subject. Then we all vote to save or condemn. The session will then be thrown open to 101 suggestions from the audience. BIG first timer or seasoned veteran, all are welcome to this light hearted session (with serious undertones), come along and maybe vote your pet hate into oblivion.

David Price, science made simple

Gerd Hombrecher

Marieke Navin, MOSI

Ruth Perkins, science made simple

Jonathan Sanderson

Communication through Learning

EdComs will be presenting a series of activities designed to inspire and educate any age in any setting. The STEM subjects lie at the centre of the activities – from individual to teamwork exercises, kinaesthetic to cognitive learning styles – the challenges can be adapted to cater for everyone. Introduced by engaging and high energy facilitators, the purpose is to bring traditionally textbook based subjects to life in a memorable and exciting fashion.

Rob Kitson

Scu Moncur

Manish Vadgama

James Frecknall

3:30 – 4:00

Special Event – “What's going on in his head?”

At the end of January BIG veteran James Piercy was involved in a serious car accident. Come along to find out first hand what happened, where he is now on the road to recovery and what he has learnt along the way. Featuring scary pictures, a bit of swearing and even a few laughs the show is james' thanks to the BIG community for its support and his way of explaining any unusual behaviour you might witness!

James Piercy, science made simple, BIG Chair