

# SCIENCE SPECTACULAR EVALUATION REPORT 2013

*"I never really used to like science, but now I LOVE it!!!"* Young Science Spectacular visitor

## INTRODUCTION

The Manchester Science Festival is a nine day programme of events held throughout the City and Greater Manchester. It aims to:

- bring science to life and inspire young people so nurturing the scientists of the future.
- provide an opportunity for people of all ages to have fun and explore what science means to them.

Staff and students from The University of Manchester have contributed to the Festival over a number of years.

As in 2011, a small co-ordinating group organised a key event, **Science Spectacular**, from 11am-4pm on 2 November 2013 in the Whitworth Hall and Manchester Museum where families could explore interactive exhibits and take part in science challenges.

[http://www.engagement.manchester.ac.uk/highlights/manchester\\_science\\_festival/science\\_spectacular/index.html](http://www.engagement.manchester.ac.uk/highlights/manchester_science_festival/science_spectacular/index.html)

[http://www.engagement.manchester.ac.uk/highlights/manchester\\_science\\_festival/science\\_spectacular/gallery.html](http://www.engagement.manchester.ac.uk/highlights/manchester_science_festival/science_spectacular/gallery.html)



## SUMMARY OF FINDINGS

*"Just to say I took the family to Whitworth Hall on Saturday and we all had a great time, especially my son who is 6. I was really impressed by the number of stands and how so many ages were catered for. My kids loved the star sticker charts, and came home full of sweets and pockets full of test-tubes. Attendance looked great too I know that lots of hard work goes into setting these things up so just wanted to say well done to all involved and thank-you. I would definitely go again and recommend it."* Science Spectacular visitor

Similar to previous years, the event was successful in engaging a number of people and all those who took part, including visitors, enjoyed the experience.

Visitors commented on the fun and friendly atmosphere that encouraged learning through interactive science challenges. Many staff were inspired by the enthusiasm and interest of the public in their research and areas of science.

*Key suggestions to consider:*

- Look at the flow of visitors to assess what might help balance the numbers in each space.
- Create an FAQs for stall holders of what to expect, who the audience is, questions asked and how much fun it is?
- Consider hiring walkie talkies for every event.

### Facts and Figures

- 1,749 people attended the event
- 54% visitors came from Manchester
- 25% visitors came from Greater Manchester
- 180 researchers took part
- 38 stands (15 new stands with 6 new activities)
- 15 stands from Faculty of Engineering & Physical Sciences
- 9 stands from Faculty of Medical & Human Sciences
- 6 stands from the Faculty of Life Sciences
- 2 stands were cross-faculty
- 4 stands from other organisations eg. BSA, Manchester Museum
- 110 people attended the microlectures
- 15 science buskers
- 10 Student Ambassadors

## METHODOLOGY

*"It was our first time, but we're inspired now to take this further!"* Participating researcher

The evaluation comprised asking questions of stand organisers via email; asking visitors for their thoughts via a graffiti wall; monitoring where visitors came from using postcode data; survey data gathered by the Festival's official evaluators; and a debriefing by the organising team. The Manchester Science Festival Observation Sheet was also completed and entered into the Festival's evaluation.

## RESULTS

### 1. Email Survey

7 stand leaders responded to the email survey (see Appendix A).

#### **1. What was your key highlight of this year's event?**

*"The whole day had a really positive vibe and, although we were all tired at the end, it was a very uplifting experience."*

One of the main highlights for respondents was the number of engaged members of the public who were keen to learn and take part in the activities. They commented on lots of young smiling faces and having interesting conversations with the adults. Another highlight was the variety of activities and the atmosphere within the Whitworth Hall.

#### **2. What could we do to improve the experience for (a) you and (b) for the visitor?**

*"Better cycling of people."*

**2 (a)** – respondents commented on the flow of visitors with stands being overwhelmed at times and on other occasions (particularly in the Kanaris in the Museum) very quiet. Museum visitors were evacuated from the Museum late morning/early lunchtime when the fire alarm went off. Most people moved into the Whitworth Hall which increased the number of people in the space at one time.

**2 (b)** – respondents suggested that more guidance is given to visitors (eg. signs, map, pathway such as an adventure trail or yellow brick road) to improve how they move round the event.

#### **3. What one tip would you offer to someone thinking about taking part in next year's Science Spectacular?**

*"Go for it! It's a lot of fun and less work that you might think."*

- Try to make sure the interactive part of your display has some kind of challenge element, since the visitors are collecting stars for completing activities.
- Note that there are likely to be a lot of kids < 10 so prepare some appropriate content/explanations/freebies for them.
- Get organised early and ask for help when you need it, there are plenty of people who have ideas, materials and are willing to volunteer on the day – it's not such a big task when you can share it with other people!
- An FAQs of what to expect, who the audience is, questions asked and how much fun it is.
- Don't underestimate how many visitors there will be and make sure you have plenty of people to help out. Also, keep it simple.
- Do it! It is a great opportunity to expose the general public to your research, and also to give you and your team training in how to communicate relatively complex ideas to a lay audience.



80-90% of people stated they had learned new facts and had a deeper understanding of science following their visit and 80% thought the delivery of activities was clear, relevant and expert.

### 5. Team Debrief Meeting

At the organising team debrief meeting the following questions were discussed:

#### *What worked well?*

- The science buskers were excellent this year and worked effectively in the Quad and the corridor between the Whitworth Hall and the Museum
- Having walkie talkies which ensured all the organising team could keep in contact and deal with issues such as the fire alarm evacuation of the Museum
- Allocating the organising team different areas to supervise eg. student ambassadors, Museum activities, Whitworth Hall, science buskers.

#### *What could be improved?*

It was felt that generally the event now runs very smoothly. There are only minor tweaks that are required and that the event should continue to be organised as it was in 2013.

- Look at not using the Kanaris Theatre in the Museum and locating stands in the Discovery Centre instead.
- Look into locating activities in the old visitor centre space on the right-hand side of the archway and opening the ground floor door into the Museum to aid visitor flow.
- Devise a flexible floor plan that can be located in the main spaces and show where stands are located.
- If possible always have a member of the organising team based in the Museum to support Museum staff.

### **RECOMMENDATIONS (including comments from the organising team)**

- Consider the flow of visitors through both the Whitworth Hall and Manchester Museum (particularly the Kanaris Theatre) to assess what might help balance the numbers in each space including using signage, floor map and having an adventure trail.
- Look into locating activities in the old visitor centre space and opening the ground floor door into the Museum to aid visitor flow.
- Create an FAQs for stall holders of what to expect, who the audience is, questions asked and how much fun it is?
- Consider hiring walkie talkies for every event as they ensure effective communication between organisers and venues.

## **APPENDIX A: Stand Leader Email Survey Results**

### **1. What was your key highlight of this year's event?**

Seeing my team of students doing brilliantly with the stall visitors (particular younger children) despite having no prior public engagement experience

### **2. What could we do to improve the experience for (a) you and (b) for the visitor?**

(a) Can't think of anything, I was really impressed with the organisation

(b) Maybe some sort of poster of the stall layout so people don't miss the areas they're interested in? (this might exist already)

### **3. What one tip would you offer to someone thinking about taking part in next year's Science Spectacular?**

Try to make sure the interactive part of your display has some kind of challenge element, since the visitors are collecting stars for completing activities.

Emma Nichols

### **1. What was your key highlight of this year's event?**

it worked very well to have the two rooms adjoining (ours 'interactive CFD' and that of Nick Bodjo and Ben Parslew with the wind tunnel). If we do this again it would be great to retain this setup. Comparing both computational fluids simulations and real walk in wind tunnel was great.

### **2. What could we do to improve the experience for (a) you and (b) for the visitor?**

a) a short 20min timetabled break in the middle. Can we have access to the photos/videos from the event (are they online)?

b) a short description of the activity they will experience in each room

### **3. What one tip would you offer to someone thinking about taking part in next year's Science Spectacular?**

Go for it! It's a lot of fun and less work that you might think. Note that there are likely to be a lot of kids < 10 so prepare some appropriate content/explanations/freebies for them.

Alistair Revell

### **1. What was your key highlight of this year's event?**

All of the positive feedback and seeing the enjoyment of children at our event – makes the effort we put in worth it!

### **2. What could we do to improve the experience for (a) you and (b) for the visitor?**

It is difficult to think about something that needs be improved, as we noticed that everything was great in terms of organisation and support for us and the visitors.

### **3. What one tip would you offer to someone thinking about taking part in next year's Science Spectacular?**

Get organised early and ask for help when you need it, there are plenty of people who have ideas, materials and are willing to volunteer on the day – it's not such a big task when you can share it with other people!

Pablo Torres Vergara

### **1. What was your key highlight of this year's event?**

The size of the event this year - it was a science adventure rather than just a day out! The diversity of stalls and PR of the event work really well.

### **2. What could we do to improve the experience for (a) you and (b) for the visitor?**

a. Nothing - very well organised.

b. Perhaps have an adventure trail or pathway to lead visitors round all stalls and help control the flow of traffic (like Ikea's yellow brick road). This helps provide a bit more structure, rather than just floating around activities. It may be possible to have several paths or themes to follow.

### **3. What one tip would you offer to someone thinking about taking part in next year's Science Spectacular?**

An FAQs of what to expect, who the audience is, questions asked and how much fun it is.

Davina Whitnall

**1. What was your key highlight of this year's event?**

The sheer number of engaged members of the public who were really keen to learn about what we do and took part in the activities. There were so many smiles and kids who really wanted to learn and asked interesting questions of the researchers. We also had some very interesting conversations with adult visitors. The whole day had a really positive vibe and, although we were all tired at the end, it was a very uplifting experience.

**2. What could we do to improve the experience for (a) you and (b) for the visitor?**

A) There were times when our stall got a little overwhelmed. It might have helped to have some stewards who could help with visitor flow so people could go away and come back when the numbers died down. Also while most children were really well behaved, there were a few who were very 'grabby', who couldn't wait their turn and tended to push other children out of the way. I know there is very little you can do about this but perhaps having a code of conduct for children so they know what is expected of them and perhaps as a little nudge to some parents.

B) Because of where our stall was placed a few push chairs were left nearby. It might be helpful to have somewhere pushchairs etc. can be left (perhaps a pushchair cloak room with a ticketing system) that is a little safer and more secure. I think maybe more signs pointing to toilets and lifts would also be helpful for visitors.

**3. What one tip would you offer to someone thinking about taking part in next year's Science Spectacular?**

Don't underestimate how many visitors there will be and make sure you have plenty of people to help out. Also, keep it simple.

Angela Foxcroft

**1. What was your key highlight of this year's event?**

Getting to meet lots of people who had an interest in weather and the atmospheric sciences, even those who maybe didn't know it yet!

**2. What could we do to improve the experience for (a) you and (b) for the visitor?**

A) Better cycling of people. The Kanaris lecture theatre felt very empty at times.

B) Better use of the museum space. Why have the exhibits in the Kanaris lecture theatre, which is probably the most boring room the museum?

**3. What one tip would you offer to someone thinking about taking part in next year's Science Spectacular?**

Do it! It is a great opportunity to expose the general public to your research, and also to give you and your team training in how to communicate relatively complex ideas to a lay audience.

Sam Illingworth

**1. What was your key highlight of this year's event?**

I hadn't been into Whitworth Hall before so I loved the excuse to see inside the building. I was very impressed by the number of visitors and range of activities at the stalls.

**2. What could we do to improve the experience for (a) you and (b) for the visitor?**

a). We had two teams of staff members at our stall in two shifts (either morning or afternoon). It would have been good if there were a few more snacks and water bottles available.

**3. What one tip would you offer to someone thinking about taking part in next year's Science Spectacular?**

Keep the activities simple and fun. It also looks great if the stall members are wearing the same (bright coloured) t-shirts representing their group.

Joanna Cobb

**APPENDIX B: Postcode Data**

**POSTCODE**

M3 City Centre/Salford	1%
M6 Eccles	1%
M13 Ardwick/Rusholme	4%
M16 Whalley Range/Old Trafford	4%
M14 Moss Side/Fallowfield	5%
M15 Hulme	1%
M20 Withington/Didsbury	12%
M21 Chorlton-cum-Hardy	2%
M22 Wythenshawe	2%
M23 Wythenshawe	1%
M25 Prestwich	1%
M26 Radcliffe	1%
M27 Swinton/Pendlebury	4%
M30 Worsley/Eccles	2%
M32 Stretford	6%
M33 Sale	4%
M41 Urmston	1%

**54%**

OL1 Royton	}	<b>3%</b>
OL4 Oldham		
OL8 Oldham		

BL3 Bolton	}	<b>1%</b>
WN8 Skelmersdale		

**Overseas – Mexico 1%**

**POSTCODE**

SK3 Cheadle Heath/Bramhall	}	<b>21%</b>
SK5 Reddish		
SK6 Marple/Bredbury		
SK8 Cheadle Hulme		
SK10 Prestbury/Bollington		
SK11 Chelford/Macclesfield		
SK 13 Glossop		
SK14 Hyde		
SK17 Buxton		
SK22 New Mills		

WA5 Warrington	}	<b>20%</b>
WA8 Widnes		
WA14 Altrincham		
WA15 Hale		
CW4 Holmes Chapel		
HD8 Huddersfield		
LA1 Lancaster		
HX7 Hebden Bridge		
PR25 Leyland		
NP26 Newport, S Wales		
BD16 Bingley		
HD9 Holmfirth		
FY5 Thornton-Cleverleys		
TS9 Stokesley, Teeside		
GL1 Gloucester		
DE12 Burton-upon-Trent		

**APPENDIX C: Manchester Science Festival Evaluator Results**

**Qu. 7 Thinking about your expectations of the event, how good did you expect it to be before you arrived?**

Very Good 30%    Good 25%    Neither good or poor 45%    Poor 0%    Very poor 0%

**Qu. 8 And how would you rate the event now you have experienced it?**

Very Good 88%    Good 12%    Neither good or poor 0%    Poor 0%    Very poor 0%

**Qu. 9 Please tell us why you gave the answer you did for the last question.**

Interactive challenges 40%  
 Fun and interesting 30%  
 Kids enjoying learning 10%  
 Specialist knowledge 5%  
 Conveyed at the right level 5%  
 Location 10%

**Qu. 10 Thinking about your interest in science, how interested would you say you were before you came to the event? Please answer on a scale of 1 to 5, where 1 is not at all, and 5 is very interested.**

1 0%    2 0%    3 33%    4 25%    5 42%

**Qu. 11 And, how interested would you say you are now that you have attended the event?**

1 0%    2 0%    3 5%    4 49%    5 46%

**Qu.12 To what extent did you feel you could have actively taken part in the event?**

1 3%    2 8%    3 26%    4 8%    5 55%

**Qu. 13 To what extent did you actively take part in the event?**

1 4%    2 13%    3 26%    4 4%    5 53%

**Qu. 14 Thinking about your experience of the event today, to what extent do you agree with the following statements? As a result of attending the event..**

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	Don't know / Not applicable
I have learnt new facts about science	57%	35%	4%	4%	0%	0%
My understanding of science is deeper	35%	52%	9%	4%	0%	0%
I want to learn more about science	35%	60%	4%	0%	0%	0%
My opinions about the subject have changed	23%	4%	51%	18%	0%	4%

**Qu. 15 Thinking about what you have seen today, to what extent do you agree with the following statements?**



	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	Don't know / Not applicable
The content was presented clearly	68%	27%	5%	0%	0%	0%
The content was relevant to me	42%	48%	5%	5%	0%	0%
The presenter was an expert in their field	71%	19%	5%	5%	0%	0%

**Qu. 16 What three words would you use to describe the event today to a friend?**

(In order of popularity...)

Interesting

Fun/Enjoyable

Interactive

Educational

Informative

Child friendly

Varied

Lively

Enlightening

Original

Good

Illuminating

Packed

Exciting

Scientific

Diverse

Worthwhile

Comfortable