



# Evaluation report

## Sports Zone

### Sponsorship by The Physiological Society

The screenshot shows the Sports Zone website interface. At the top left is the 'I'm a Scientist Get me OUT of here' logo. In the center, a 'Meet the Scientists...' banner features five scientist portraits: Steve, Justin, Gavin, Fiona (marked 'WINNER!'), and Audra. The top right has a 'Sports Science Zone' dropdown menu and a 'Go!' button. Below the banner is a navigation bar with 'Zone Home', 'My Profile', and 'Scientists' tabs, a search bar, and 'Ask?', 'Chat', and 'Vote' buttons. The main content area displays five scientist profiles:

- Steve Faulkner:** Profile picture, bio, and status: "5.30am start today for testing, good session and a lunchtime swim done!".
- Justin Lawley:** Profile picture, bio, and status: "Come on!!!!!! Cool videos are better than another website. Awesome videos about".
- Gavin Devereux:** Profile picture, bio, and status: "I research and teach exercise physiology (how your body works during and after physical activity), specifically looking at the cardiovascular system.".
- Fiona Hatch:** Profile picture, bio, and status: "Thank you for all the votes! Going to miss having the live chats :(". A 'WINNER!' badge is visible on her profile picture.
- Audra Benjamin:** Profile picture, bio, and status: "Parting is such sweet sorrow! All the best to Justin and Fiona!".

Each profile includes a 'Read more about me' link and a 'Latest Question' or 'Latest Comment' section.



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## ***Executive summary***

The Sports Zone of I'm a Scientist, Get me out of here! 12<sup>th</sup>-23<sup>rd</sup> March 2012 was **successful**:

1. The recruitment process by The Physiological Society worked well, resulting in 11 applicants from a wide range of institutes for the 5 places.
2. The Sports Science Zone was the most popular zone requested by teachers.
3. There was good communication between The Physiological Society and Gallomanor.
4. Scientists found the training session useful and beneficial (see page 6).
5. The students that did take part were very focused on sports and the human body. Some popular keywords include Body, Blood, Brain, Cardiovascular, Cells, Exercise, Heart, Human Body, Lung, Oxygen, Performance and Running (Figures 5&6). Discussions ranged from how extra organs would effect the human body to the best way to improve personal health.
6. The 'Meet a Physiologist' Information Sheet was produced and included in all teacher packs. Information Sheets are rarely used during the event, but 40% of teachers we surveyed plan to use the Information Sheet in the future.
7. The scientists were challenged within and beyond their areas of research.

The Sports Zone was **less successful** in:

1. The Sports Zone wasn't very busy. It was slightly below average on most counts, except that the students that did take part were very active.
2. There was a low turnout of teachers which was skewed by 3 out of 4 PE teachers not turning up (representing 6 out of the 21 classes). We now know that PE teachers are less likely to turn up, perhaps more so due to the good weather experienced during the event. In future we would over recruit PE teachers.
3. We could have offered a school prize from The Physiological Society to increase the links between the sponsor and schools.

	Sports Zone	Zones average	Whole event
Number of registered students	234	330	2,626
% of active students (ASK, CHAT, VOTE or commented)	91%	87%	-
Number of questions asked	706	1,134	9,070
Number of questions approved	363	424	3,394
% of questions approved	51%	39%	-
Number of students that asked questions	133	145	1,156
Number of questions asked per student	3	3.4	-
Number of questions marked as duplicates	127	221	1,764
Number of questions answered	301	410	3,278
Number of answers given	420	977	7,819
Total number of comments	102	148	1,185
Number of comments by students	75	105	838
Number of comments by scientists	27	43	344
Number of votes	208	334	2,669
Number of students who voted	174	242	1,936
Number of live chats	14	16	125
Number of lines of live chat	3,534	6,106	48,845
Number of students who chatted	164	217	1,732
Number of schools	7	10	81

Figure 1: Figures from I'm a Scientist March 2012 for the zone, the average of all 8 zones, and the whole event

5 scientists in the Sports Zone:

- Steve Faulkner (PhD Student – Loughborough University)
- Justin Lawley (PhD Student – Bangor University)
- Gavin Devereux (Course Leader for BSc Sport & Exercise – University Campus Suffolk)
- Fiona Hatch (PhD Student – University of Hull)
- Audra Benjamin (Research Assistant – St George's, University of London)

## **1. Introduction and background**

### ***I'm a Scientist, Get me out of here! (IAS)***



I'm a Scientist, Get me out of here! is an online event where students get to meet and interact with real scientists. It's an X Factor-style competition between the scientists, where students are the judges. Students submit questions which the scientists will try to answer by the next day. Students then have live online Facebook-style chats with the scientists, where they ask questions, learn more about the scientists, and let scientists know their opinions. It takes place online over a two week period.

The event ran for the 8th time from 12th-23rd March 2012. In each zone there are 5 scientists and around 350 school students in 20 classes. IAS is designed to support the How Science Works curriculum and to bring real science to life for students, supported by carefully developed classroom resources. It helps:

- Develop discussion and critical thinking skills
- Cover key concepts in How Science Works
- Get students engaged with science
- Provide lesson plans, information sheets and resources for different ages and ability levels, between years 9 – 13

### ***The Physiological Society***



Physiology is an essential discipline which seeks to understand how the human body works; the study of how cells, organs and muscles interact contributes crucial insight into sports performance. The Physiological Society brings together more than 3,000 scientists from over 60 countries, and since their foundation in 1876, their Members have made significant contributions to the knowledge of biological systems – many in the area of sports physiology.

The Physiological Society is committed to engaging with public audiences. Sponsoring I'm a Scientist meets many of their aims for outreach, including inspiring younger people to study physiology. They fund gold-standard public engagement projects like IAS through their [Public Engagement grants](#) scheme.

## 2. Participation

### 2.1. Scientists

The 5 scientists in the Sports Zone are all members of The Physiological Society and are based at a range of institutions in the UK.

There were a total of 208 votes cast in the Sports Zone. There were four rounds of voting with one scientist evicted at each round. Students could cast their vote in each round. **Fiona Hatch** was the winner of the Energy Zone.



Scientist	Institute	Brief description of their research. Written by the scientist for rating by students, teachers, IAS staff and PhySoc	Result	% of votes	Number of profile views
<a href="#">Fiona Hatch</a>	University of Hull	My research focuses on how body temperature may be manipulated in order to improve sports performance	1st	37%	999
<a href="#">Justin Lawley</a>	Bangor University	I put humans in very uncomfortable situations such as extreme cold, heat and altitude to see how the body works, for example, I study whether human brains expand when people climb	2nd	25%	723
<a href="#">Audra Benjamin</a>	St George's, University of London	I look at the split personality of the lung; releasing liquid then taking liquid in.	3rd	21%	652
<a href="#">Gavin Devereux</a>	University Campus Suffolk	Squeeze this, and push that – how certain types of exercise can make your heart and blood vessels healthier!	4th	11%	582
<a href="#">Steve Faulkner</a>	Loughborough University	My research focuses on how body temperature may be manipulated in order to improve sports performance	5th	5%	489

Figure 2: The five scientists in the Sports Zone

### 3.2. Schools

12 schools were invited to take part in the Sports Zone, and 7 of these turned up. 1 out of 4 PE teachers turned up and 6 out of 8 science teachers.

### 3.3. Scientist training

As an added benefit to The Physiological Society Gallomanor ran online communication training for the Sports Zone scientists. The training was optional and offered to all scientists in the weeks before the event started. It was aimed at introducing them to communicating online, and to still be beneficial if the scientists had done public engagement activities before. The aims of the training were:

- To prepare the scientists to take part effectively in I'm a Scientist and in future public engagement activities
- To prepare the scientists to get the maximum development benefit from taking part
- To give the scientists a chance to 'meet' each other, learn from each other, and develop camaraderie

The format was:

1. Pre-training survey
2. 2 hour online chat/webinar. Scientists got practice in live chats and answering questions, feedback and tips. Guidance on what the event will be like, dealing with live chats, the kind of questions to expect and how best to answer in a range of circumstances. The workshop also considers why we do public engagement, what constitutes effective public engagement, and how to evaluate it. It also includes some training on how to reflect on and develop their skills during the event, and consolidate their learning.

In general feelings expressed were:-

- Better understanding of how the event would work, what it would be like. Realising it sounds fun!
- Feeling more confidence using the site, especially the live chat.
- Feeling more confident about answering questions.
- Feeling more confident about communicating their work to teens.



Figure 3: The location of the 7 schools in the Sports Zone in the UK

### 3.4. Questions asked in ASK and CHAT

Questions posed through the ASK facility are moderated by the team before being approved to the scientists. Due to the large volume of questions asked there are options to mark questions as a duplicate of another, refer the student to see the scientists profile if the question has been answered there, and delete rude or offensive questions (see moderation policy: [imascientist.org.uk/scientists/help-2#moderation](http://imascientist.org.uk/scientists/help-2#moderation)).

#### Sports Zone

The Sports Science Zone started off quietly, but things quickly heated up, with lots more questions being asked by the second week, and lots of live chats on the go!

There were lots of questions about the number of organs in the human body, and what would happen if this changed. What would happen if you had [1 lung](#) / [3 lungs](#) / [2 brains](#) / [half a brain](#)? [What would happen if you had two hearts](#) was particularly popular, perhaps influenced by a certain sci-fi doctor with a sonic screwdriver. The students also grabbed the chance to ask experts the best way to improve health, fitness and sporting performance. In live chats, the students were also keen to find out more about the scientists themselves, with lots of questions being asked about their education and leisure pursuits in particular.

The unexpected smash topic of this zone was undoubtedly pastry. Scientist Gavin is a pastry fan, and mentioned this on his profile. Cue many questions about the [science of pastry](#) and [pastry preferences](#).

Site page	Pageviews
<a href="#">Did the Big Bang create the world?</a>	98
<a href="#">what is the craziest experiment which you have ever done.</a>	67
<a href="#">Does time of the day affect running speed, by how much and why?</a>	51
<a href="#">is it possible to have two hearts and how will it improve life and performance?</a>	48
<a href="#">what do blind people see in their dreams?</a>	40
<a href="#">how do animals breed ?</a>	38
<a href="#">How fast can a tornado travel?</a>	38
<a href="#">is milk better than lucazade(e.t.c) when you exersize</a>	38

Figure 4: Some of the most viewed questions in the zone. Some questions were tweeted which may have increased the number number of times they were viewed by spectators.





animal<sup>15</sup> body brain<sup>12</sup> cardiovascular<sup>38</sup> cell diet disease drug earth<sup>11</sup> enjoy  
evolution evolve exercise<sup>12</sup> experiment favourite food future<sup>14</sup> grow heart<sup>23</sup>  
heart beat human humanbody<sup>33</sup> illness<sup>7</sup> leisure life lifestyle<sup>26</sup> lung<sup>17</sup>  
nutrition organ pain<sup>6</sup> perform performance<sup>14</sup> planet reproduction<sup>8</sup> research<sup>26</sup> running  
science scientist sense society space<sup>11</sup> speed stamina sun time<sup>9</sup>

Figure 5: Key words in the Sports Zone. Moderators tag the keywords in each question so when people are browsing the website, the site can suggest 'related questions' on a similar topic that they might also want to read. The size of the word represents its popularity; the superscript number indicates the number of times it was tagged as a key word.



Figure 6: The most popular used words from the Sports Zone live chats that took place over the event. The size of the word represents its usage and popularity.

**Q Question: do ants have all the organs in them that we do ?**  
 Asked by [10cucharlh](#) to [Audra](#), [Fiona](#), [Justin](#) on 22 Mar 2012.  
 Short link <http://ias.im/69.1437> | [Comment on this question](#)  1

**Q Question: do our organs develop when we grow older ?**  
 Asked by [10cucharlh](#) to [Audra](#), [Fiona](#), [Justin](#) on 22 Mar 2012.  
 Short link <http://ias.im/69.1435> | [Comment on this question](#)  0

**Q Question: can you have such thing as a fake brain ?**  
 Asked by [10cucharlh](#) to [Audra](#), [Fiona](#), [Justin](#) on 22 Mar 2012.  
 Short link <http://ias.im/69.1431> | [Comment on this question](#)  1

**Q Question: How much exercise do we need to do to prevent obesity?**  
 Asked by [tomandclare](#) to [Fiona](#), [Audra](#) on 13 Mar 2012.  
 Short link <http://ias.im/69.280> | [Comment on this question](#)  0

### 3.5. Site statistics

Site statistics for the 5 week period surrounding the March event (20<sup>th</sup> February – 26<sup>th</sup> March) produce the following data:

Site page	Pageviews
Sports Zone	17,045
Sports Zone homepage	1,657
ASK	1,397
CHAT	1,193
VOTE	826
List of questions	722
Scientists page	400

Figure 7: Number of views of zone pages on the I'm a Scientist site.

## 4. Publicity

### Twitter

I'm a Scientist (@imascientist) regularly tweeted event updates and popular questions asked across all zones. Tweets mentioned The Physiological Society's (@ThePhySoc) sponsorship of the event. One of the sports scientists (Steve Faulkner) was on twitter, as was one teacher from the Sports Zone.

### IAS website

The Physiological Society are mentioned on the partners page ([imascientist.org.uk/about/partners](http://imascientist.org.uk/about/partners)) with text and a logo. The Physiological Society logo and text are also on the Sports Zone homepage ([sportsm12.imascientist.org.uk](http://sportsm12.imascientist.org.uk)) and there are also links to The Physiological Society on these pages.

The Physiological Society sponsorship of the Sports Zone was mentioned in emails sent out to teachers and scientists and blog posts on the IAS site (e.g. [imascientist.org.uk/2012/02/whos-taking-part-this-march](http://imascientist.org.uk/2012/02/whos-taking-part-this-march) and [imascientist.org.uk/2012/03/day-10-final-evictions](http://imascientist.org.uk/2012/03/day-10-final-evictions)).

#### About I'm a Scientist

I'm a Scientist is like school science lessons meet the X Factor! School students choose which scientist gets a prize of £500 to communicate their work.


Scientists and students talk on this website. They both break down barriers, have fun and learn. But only the students get to vote.



This zone is the Sports Zone. It has a range of scientists studying all different topics. Who gets the prize? YOU decide!

The Sports Zone is sponsored by the [The Physiological Society](#). Their members' research in physiology helps us to understand how the body works; it also helps us to realise what goes wrong in disease and to identify new treatments for disease.

They look at how the different cells, tissues, organs and systems of the body are integrated. Many of their members look at what happens to the body in "extreme states" like when we're ill, exercising, or living up a mountain.

You can find out more about the work [The Physiological Society](#) supports by going to one of our [public events](#), or having a [visit](#) from one of our members. You can also check out the [videos and interviews](#) on our website for students and teachers.



 **Physiological Society** @ThePhySoc  Retweet  Favorite 23 Mar  
Congratulations Fiona. RT @imascientist Sports Zone winner is...  
Fiona Hatch! @UniOfHull @ThePhySoc #IAS2012

 **I'm a Scientist Team** @imascientist  Reply  Delete  Favorite -23 Mar  
Sports Zone winner is... Fiona Hatch! @UniOfHull @ThePhySoc  
#IAS2012

RT @imascientist: Do smaller people have smaller hearts?  
[bit.ly/GKcMXX](http://bit.ly/GKcMXX) Question asked in @ThePhySoc Sports Zone  
#IAS2012

 14 days ago **Physiological Society** 

"How many nerve endings does the human brain contain?"  
[bit.ly/wgdrq1](http://bit.ly/wgdrq1) in @ThePhySoc sponsored Sports Zone #IAS2012

 22 days ago **I'm a Scientist Team** 

Oh yes, and of course the wonderful @imascientist are doing #ias2012,  
so two of our BTEC classes will be taking part. #asechat

 a month ago **Julia** 

 **I'm a Scientist Team** @imascientist 6 Jan  
The Sports Science Zone is sponsored by @ThePhySoc members  
whose research looks at sports and exercise physiology #IAS2012

## 5. Benefits

### Scientists

Scientists improved their communication skills and often found a renewed vigour for science and their research. At the time of writing 16 of the 40 scientists had completed the post-event feedback survey. 94% they would recommend doing I'm a Scientist to a colleague. Here are some of their comments:

- *"I've had a blast" – Sports Zone Scientist*
- *"I really enjoyed participating in IAS, it was an invigorating experience" – Scientist*
- *"I hugely enjoyed it. There are clearly some smart kids out there" – Scientist*
- *"I've actually learnt heaps by going and checking my answers, looking stuff up etc" – Scientist*
- *"I'm a scientist gave the students an opportunity to not only ask questions, but to also ask followup questions and make comments. This gave me valuable feedback to help me to improve my communication with students of this age" – Scientist*
- *"I have to say, this is one of the best things I've ever done - science wise" – Scientist*

### Students

Students gained an **increased awareness of what scientists actually do** and what scientists are like.

**Students engaged in debates with scientists**, after scientists answered questions. Students felt empowered enough to tell scientists their views and discuss topics with them. It also showed students that scientists don't always know the answer. **Scientists were challenged by the questions asked.**

Many students left positive comments during or after live chats, including:

- *"This scheme gives science a depth that you can't explore anywhere else" – Student*
- *"I loved the event as it gave me a chance to talk to actual scientists rather than searching through the internet and I could get their opinions instead of just facts" – Student*
- *"I absolutely loved taking part and i really hope my teacher does it again next year!" – Student*
- *"Finding out new things about science was very interesting and you could ask almost anything and they would know. I loved that, because there are many odd things that I love knowing the answers to. I'm a scientist really made our science lessons interesting for a while and I would love to take part in something like it again! :)" – Student*
- *"we are in a science lesson but we would do this in our own time, thank you for infatuating us with your knowlegde." – Student*
- *"I really had a lot of fun taking part in this- it motivated me to read more around the subject (restarted a book on quantum mechanics, looked up latest science new and breakthroughs, watched some horizon programs, looked through old physics schoolwork to remember questions that I had then...) this past week so that I could come up with more questions that would get interesting answers from the scientists" – Student*

Teachers noted how their **students had benefited from taking part:**

- *“Thanks to you and your team for a fantastic I'm a scientist, the kids (and me) really loved it” – Teacher*
- *“Thank you so much. My Year 9 class thoroughly enjoyed their live chat with you all. It was very positive. ...” – Teacher*
- *“Seeing the excitement of the students as they received feedback to thier questions. Also witnessing thje growing confidence of the students in asking questions” – Teacher*
- *“The participation level/interest from the students - its was very inspiring” – Teacher*
- *“my boys are inspired by the answers - still buzzing now!” – Teacher*



Figure 8: Locations of scientists (red) and schools (blue) in the UK across the whole I'm a Scientist event in March 2012.