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## Event Awards case studies

### *Categories*

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Primary School / Secondary School / Community / Engineering / STEM

The British Science Association would like to acknowledge those organisations that provided case studies for this guide. More case studies at [www.nsew.org.uk](http://www.nsew.org.uk).

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# Primary School Category Winner

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## Simmondley Primary School

*A whole new world*



### *Target audience*

Primary school children (4 – 11-year-olds).

### *People involved*

- Staff
  - 14 teaching staff – Demo Day demonstrations, assisting with workshops
  - 2 support staff assisting with workshops
- Volunteers
  - STEM ambassador (PhD student in Molecular Biochemistry, University of Aberdeen) – design and delivery of half day workshops with each junior class, scientist Q&A session, junior science demonstration assembly
  - STEM ambassador (University of Sheffield) – full day activity with infant classes
  - Physicist from local electronics manufacturer – career presentations
  - Zoologist – scientist Q & A session

### *Main steps of the organisation process with a short explanation of each step*

- Getting the idea

We took inspiration from the “future worlds” theme and decided to ask the children to explore what would be required if the human race were to colonise a new planet. The aim of this was to allow the whole school to work together on one project, whilst allowing each class to focus on a specific area.
- Organising

My main point for liaison was with the Year 6 teacher (by a happy coincidence, she’s also my mum). Once I had basic themes for each class workshop she organised the timetable for the week, allowing each junior class to have a half day off timetable for their workshop and taking the infant classes off timetable for a full day. We also organised an afternoon scientist Q & A session for the older junior classes, and a visit to each of the junior classes from an electronics engineer to explain their work.



I also produced "lab books" for each student in the weeks prior to the event. I felt it was important that the children experience other important skills related to work as a scientist, such as recording all their observations in one place - some classes undertook investigations which required results to be recorded each day of NSEW.

- *Delivering*

The week began with a whole-school assembly introduction to NSEW and encouragement of the children to be inquisitive and ask questions. Each workshop focussed on one of the topics below:

- Origins of life – microorganisms
- Building bridges – structures and homes
- Space plants and alien animals – habitats and adaptation
- Building blocks of life – DNA workshop
- Rocket scientists – building rockets and planes
- Energy for life – renewable and non-renewable energy

The infant classes received a full day of activities surrounding food topics delivered by another STEM ambassador. Throughout the week "Year 6 media" interviewed students in each class on their workshop, and asked how they were going to help with colonisation of the new planet. Interviews were both recorded and written up for delivery by Year 6 in their assembly the following Friday. Parents were invited to the school for this to see the work that the children had been doing throughout the week. A display was also installed in the main entrance of the school with sample work and photos from each class workshop. It was also important that the children were exploring their science topics in other lessons, and so both experiments and demonstrations were written up as part of literacy work.

On Thursday the school took part in national Demo Day, with each teacher demonstrating a practical science experiment to their class, including elephant's toothpaste, self-inflating balloons, and ocean currents. Finally, on Friday the school took part in Sports Relief, and Year 5 and 6 received taster sessions in sports science during their games lessons. Two children from each class also received "scientist of the week" awards in the school awards assembly.

The last session on Friday afternoon was dedicated to a scientist Q & A session with a zoologist and a molecular pharmacologist.

- *Evaluating*

At the end of the Friday's session, children were asked to complete the feedback forms for the BSA and school to evaluate the success of the week.

### Top tips for first-time organisers

1. Be aware that the event will be a lot of work! Start planning early and have all your resources organised.
2. When working with primary school children allow more time than you think will be necessary for each task.
3. Don't try to do everything yourself! Take help when offered and ask for help or expertise when it is needed.

### Top benefits of taking part in NSEW

- Public engagement is becoming an increasingly important part of being a research scientist.
- It provided an excellent means for the school to work together towards a common goal, as well as earning the staff and school good publicity and a way to attract potential students. It was also a good way to gain extra funding towards future science endeavours, such as the planned practical science demonstration next year.
- Most importantly, the children had a lot of fun. They were focussed and engaged with the topics, learnt lots of new skills and were inspired to explore new areas of science.

*"The science ambassador was inspirational in motivating children to engage with the many and varied science investigations that were covered."*

*"All the investigations were challenging, original and thought-provoking"*

*"We probably reached more people today than we do on doors open day"*

*"Overall the week was a huge success"*



# Secondary School Category Winner

## St John's Marlborough

### National Science & Engineering Week and Marlborough Science Fair



#### Target audience

During the academic week we worked with Year 2 students from our primary feeder schools and our students (Year 7 -13). The Marlborough Science Fair was targeted at families.

#### People involved

- St John's Marlborough staff
- Volunteer students
- 12 local public organisations
- 6 local companies
- 8 science and engineering organisations
- 2 presenters.

#### Main steps of the organisation process with a short explanation of each step

- Getting the idea  
We are able to build on our learning experience from previous years to know what works successfully for National Science & Engineering Week. This process starts with analysing the evaluation forms from previous events. This enables us to decide on a broad theme and ideas for the week.
- Organising  
It is very important to start the organisational process as early as possible. As soon as one year finishes we book some activities straightaway to ensure that they are available.  
In November a meeting takes place with departmental representatives to discuss activities that could take place during the week, ideas for presenters, and what they would like to do at the Marlborough Science Fair. They then have time to be able to speak to other members of their department before feeding back information in January. Local organisations and businesses are approached in January and asked if they would like to be involved in the community day, the academic week or both.



- *Delivering*

The academic week starts as soon as students arrive on the Monday morning with tutor group quizzes, picture quizzes and competitions which students can enter in our atrium and numerous displays. Lunchtime always has activities associated with the week which are run by a variety of departments to enable student engagement.

Through the week a number of organisations visit the school to speak to the students. These sessions can either be for a whole-year group, a class or a selected group of students. A decision is made based on the subject matter, year group and discussions with teaching staff and the presenters. This is managed so that over the week all students have specialist opportunities.

Evening lectures are available during the week. These are suitable for students and members of the public. These seem to attract a very diverse audience.

The Marlborough Science Fair is a major community event attracting nearly 2500 visitors. The day has free entry but visitors can pay to watch science shows or visit a planetarium. At the Science Fair visitors are able to participate in numerous hands-on experiments and activities which are delivered by our students, our staff or external companies and organisations.

- *Evaluating*

Evaluation takes place during the week and at events. This evaluation forms the starting point for the planning for the following year.

### ***Top tips for first-time organisers***

- Start early – it always takes longer than you think
- Keep focussed on the target audience
- Hands-on activities are best!
- Smile!!!

### ***Top benefits of taking part in NSEW***

#### *You*

- A real sense of achievement when everything comes together at the end
- Being able to work with a diverse range of people
- Seeing the community together.

#### *Organisation*

- Being able to interact with outside organisations and develop links



- Being able to enhance the curriculum
- Being able to engage all students during the week
- Developing community involvement
- Raising awareness of STEM
- Working together as a large team.

### Audience

- Being able to attend events at the local secondary school
- Increased understanding of STEM
- Meeting St John's students and staff
- Attending a highly successful and free community day
- Our students are able to enjoy fun activities and learn new things.

*"Joe has been inspired by his experience and I know he will be talking about it for ages. It really was absolutely amazing."*

*"We had no idea what to expect and it was like a mini @Bristol experience with such a huge variety of hands-on fun things to keep my boy thoroughly entertained. The staff were superb."*



*"Excellent first time and definitely coming again."*

*"The event was FANTASTIC! We were here over 4 hours. Thank you so much."*



# Community Category Winner

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## Community Perspectives

### *Girls: Learning Code*



#### **Target audience**

BME inner-city girls aged 7-16

#### **People involved**

- Event organiser to coordinate the activity
- A PhD student of computer science and STEM ambassador
- 4 volunteer ambassadors for the initiative
- A link at Birmingham University who helped to find our female computer scientist
- STEM professionals from Birmingham University
- A radio presenter who promoted the event and interviewed the girls on the day

#### **Main steps of the organisation process with a short explanation of each step**

- Getting the idea

As part of our on-going research into the underlying reasons for under-representation of some BME groups across the STEM sector, we came to realise that computer science is amongst the most unrepresentative when it comes to women, particularly Black Caribbean women, in the UK. This was highlighted by Eva Navarro-Lopez, founder of AMC Women Europe Committee, who had been trying to locate a black woman to talk at the AMC Women Encourage conference in March. This helped us in our decision to kick off our activities exploring computer science and technology.

- Organising

We engaged with Birmingham University to help us find a suitable computer programmer. We particularly wanted a female computer scientist with a coding background to facilitate the session, as we felt that this would be an added inspiration for the girls. We were also put in contact with a PhD student of computer science, who was also a brand new STEM ambassador. Once this contact had been established, we then liaised directly with one another, working closely to develop the content of the presentations and the lesson plan to ensure the material was relevant and engaging to the young people.

To promote the event, a sleek flyer was created by one of the girls who later





attended the event. This also served as an advert for our work, and for volunteer recruitment. This was kindly distributed to attendees of the AMC Women Encourage Conference at Manchester University.

- *Delivering*

The aim of the event was to raise awareness of computer science, programming and other tech careers. We did this by 'pulling them in' with a topic they could relate to being part of their everyday experience which in this case, was computer games and apps.

- *Evaluating*

Our group and individual evaluations – including evaluations with parents regarding their daughters' aspirations – were very useful, as we found that mothers were as, if not more keen than their daughters to learn more about programming themselves!

### ***Top tips for first-time organisers***

- If you are a community group, make friends with your local universities.
- Network and build relationships
- Get to 'know' your target audience and work together
- Find ways to make the STEM topic relevant
- Book a few extra participants to allow for no-shows!

### ***Top benefits of taking part in NSEW***

- Although we knew our particular audience wouldn't find us via NSEW media channels, we felt that the buzz of NSEW and the publicity was a great opportunity for us to get involved and profile (and test) ourselves as an emerging provider of worthwhile STEM projects, aimed at and designed with BME inner city communities. Winning Best Community Event is very encouraging and a credit to all involved.

***"I've learnt that you can do lots of things with coding and how coding works"***



***"I can make games!"***





# Engineering Category Winner

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## My Future, My Choice

### *Lifting Aspirations and Accessing Engineering*

#### **Target audience**

Secondary school students aged 12 to 13.

#### **People involved**

- 52 volunteer engineers
- 3 staff on the day
- 1 person to coordinate, recruit and plan.

#### **Main steps of the organisation process with a short explanation of each step**

- Getting the idea  
Ideas came from working with engineering volunteers on an 'Ingenious' project funded by the Royal Academy of Engineering at M Shed Museum Bristol.
- Organising  
We started by looking at the potential of the event and bringing people on board who could help us achieve our objectives. These ranged from university students to crane operators. All needed to know their role and how the day would work, as well as what the key messages were.
- Delivering  
The public engagement day was incredibly well attended and people stayed to learn and teach each other.
- Evaluating  
This was all done directly on each day by listening and amending the event to improve it. Schools sent us emails, but we had no formal feedback process.

#### **Top tips for first-time organisers**

- Volunteers and business support will follow if you can prove the event has been tried and tested and has a measurable impact.

### *Top benefits of taking part in NSEW*

- This week focuses attention, and schools and business are more willing to take part.

*"This is great - I want to be an engineer"*

*"This activity really works on all levels: past, present and future"*

*"The students and the teachers had a really excellent day"*



# STEM Category Winner

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## University of Southampton *Science and Engineering Day*

### *Target audience*

The general public and especially families.

### *People involved*

- 400 people involved in the event
- 5 core event staff
- 40 student ambassadors
- Show and exhibition presenters
- Local organisations such as Soco Music with the Vegetable Orchestra
- Local scientist

### *Main steps of the organisation process with a short explanation of each step*

- Getting the idea  
A steering and a working group were formed with one overall event organiser ensuring things moved along. They met monthly to discuss progress and any issues. The working group was made up of a wider group of people from lots of different areas in the university, and not exclusively Science and Engineering.
- Organising  
The working group helped to coordinate the range of different activities from their subject areas. Practical things like booking rooms and exhibition spaces took place, as well as organising the design for the flyer and other marketing. A number of different people were contacted about doing scheduled shows on the day, involving both university and non-university people. Working group representatives submitted plans for exhibition stand activities and other possible activities, such as open laboratories. These plans included space requirements; number of staff and students involved, etc. Marketing leaflets went out schools and community groups, with corresponding information listed on the website.
- Delivering  
Finalising activities:  
We ensured a good range of activities, and that all activities had their own risk assessment in place. The exhibition layout was planned and the show timetable





was printed. Final details were put on the website and the final guide went to print.

Preparing on the day:

We handled final queries from stand exhibitors, did health and safety checks during the set-up, and then made sure everyone was there nice and early to welcome visitors into the university.

- Evaluating

We had an evaluation form to gather evidence from attendees and we had wash-up/debrief meetings with staff. We also used a Twitter hashtag for the first time this year, which helped us to get interesting real-time feedback.

### *Top tips for first-time organisers*

- Think about what activities you want to show and have plenty of people to help demonstrate them
- Have lots going on, as it helps to create a real buzz!

### *Top benefits of taking part in NSEW*

- Science and Engineering Day is the largest single event the University undertakes for reaching out to children and families. Those involved in the day are passionate about science and engineering and they enjoy telling people about it, which is what NSEW is all about.

*"I will definitely come again. It was amazing"*



*"A brilliant way to enthuse children with science. A perfect day out!"*

*"We all learnt loads."*

*"Always a really engaging event"*



