Educating, entertaining and inspiring
through public engagement with research

York Researchers' Night (YorNight) 2020 Impact Report

Contents

All photography by Alex Holland, University of York

Showcasing the power of research

York Researchers' Night (YorNight) 2020 offered a journey of discovery into the amazing world of research through fun activities for all ages, thought-provoking talks, and a Science Cabaret.

Hosted by the University of York on Saturday 8 February 2020, the free event at York Barbican highlighted the diverse research being carried out in our city. Attended by over 4,000 people[1], YorNight provided 187 contributors[2] – the majority researchers from the University of York – with a platform to demonstrate the incredible power of research to influence and transform our daily lives.

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[1] 3557 in the exhibition and 718 in talks and cabaret

[2] Based on survey results: 9% Academic staff; 15% Post-docs; 37% PhD students; 5% Masters students; 2% Research assistants; 6% Admin/technical staff; 20% Undergraduates; 6% Other (including York Explore library staff and members of external educational organisations and professional bodies)

YorNight 2020 at a glance

Key facts

4,275 audience
187 exhibitors, speakers and performers
14,171 web page views[3]
Over 90,000 reach over two social media platforms, with 4,600 engagements[4]

Over 250 attendees gave feedback on the day and 220 people responded to a survey circulated to ticket-holders. Of these:

- 92% would recommend the event to a friend
- 90% rated YorNight as excellent or good[5]
- 87% spent more than one hour at the event[6]
- 94% learned something new

"It was an inspiration. I learned new and interesting things and it was also fun." YorNight attendee

Figure 1: Word cloud of responses to the question 'What is the most interesting thing you've learnt at YorNight?'

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[3] yornight.com
[4] Twitter: 59,763 impressions and 3,327 engagements Facebook: 30,576 reach and 1,328 impressions
[5] 63% of attendees rated the event as Excellent or Very Good; 27% as Good; 7% as Average/Fair; 3% as Poor
[6] 13% of attendees spent less than an hour at the event; 30% spent 1-2 hours; 41% spent 2-3 hours; 10% spent 3-4 hours; 6% spent over 4 hours at the event

A university for public good

A member of the prestigious Russell Group, the University of York is a research-led institution which aims to be a leading contributor to public good in our city and region. Through public engagement with research, the University seeks to educate, entertain and inspire, and plays a major role in the educational, social and cultural development of York and Yorkshire.

Unlike other University programmes that engage school students and adult audiences, YorNight provides a family learning environment, offering a large and diverse range of hands-on activities and accessible talks.

Of the 4,275 people who attended YorNight 2020, 84% did so as part of a family group, with under 11-year-olds making up 42% of the audience. A further 10% were aged 11-18 and 45% were aged 19-59.[7]

The main aims of YorNight were to:

- Educate, entertain and inspire
- Attract a wide and diverse public audience to engage with York research and researchers
- Demonstrate how the University of York is responding to society's biggest challenges
- Break down barriers around the perception of research and researchers
- Raise aspirations, particularly in those least likely to engage with higher education
- Illustrate the diversity of research careers

 "[YorNight] opened my eyes to how much they [researchers] do and how interesting it can be." YorNight attendee

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[7] 17% of attendees came to the event with an employee of the University of York; 83% of attendees did not include any University of York employees in their group.

Responding to society's greatest challenges

From tackling air and plastic pollution, to harnessing fusion power, to creating interactive experiences for people exploring historic places and heritage sites, YorNight provided University of York researchers with a platform to demonstrate the relevance and importance of their work.

Through interactive hands-on activities, games, puzzles and experiments, as well as short bite-sized 15-minute talks and a Science Cabaret, researchers from 16 academic departments[8] presented their work in easily accessible ways, explaining how it is helping to tackle some of today's most pressing issues.

"I was very impressed how most researchers had managed to turn their research into an interactive learning session, and how most of the stalls appealed to both children and adults." YorNight attendee

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[8] Archaeology, Biology, Chemistry, Computer Science, Electronic Engineering, Environment and Geography, Health Sciences, History, History of Art, Language and Linguistic Science, Management, Mathematics, Music, Physics, Psychology, and Television, Film, Theatre and Interactive Media.

Bringing research to life

YorNight aims to break down barriers around the perception of research and researchers, and illustrate the diversity of research careers available.

Just over 60% of respondents said the event had changed their view of research and/or researchers. All reasons given were positive and included more varied (17%), more interesting (15%), and exciting / fun (10%). A further 15% commented positively on the researchers, who were described as friendly, engaging, encouraging, creative, approachable, inspiring, passionate, dedicated, enthusiastic, hard-working and cool.

Of the 39% who said their views had not changed, comments indicated that the respondents already had positive views on research and researchers. [9]

When asked what they liked most about YorNight, the largest response (28%) was the variety on offer and the range of topics covered. A further 20% liked the hands-on nature of the event best, while 12% most appreciated the enthusiasm of the participating researchers.[10]

"It made research more accessible and appropriate to our lives." YorNight attendee

"The breadth and depth was eye opening." YorNight attendee

Figure 2: Word cloud of responses regarding what attendees enjoyed or liked the most about the event

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[9] A full breakdown of responses is given in Appendix A
[10] Further comments are available in Appendix B

Raising aspirations

As a university for public good, one of the University of York's key priorities is to open up pathways for under-represented groups into higher education and beyond into a thriving regional economy.

In addition to general marketing aimed at families[11], YorNight included a targeted marketing programme to attract those who would not normally engage with higher education. This included door-to-door leafleting in areas selected based on City Of York Council ward profiles, paid Facebook adverts to specific demographic groups (28% of attendees said they had heard about the event through social media[12]), Minster FM advertising, and distribution of money-off vouchers for York Barbican café to selected local schools with a high percentage of free school meals.

Local Scout and Guide groups were encouraged to attend, with information posted online about how activities on offer linked to badges. On the day, a special Scouts and Guides passport was available with suggestions of things to do, as well as a YorNight badge.

YorNight was held close to the city centre rather than on campus to help break down any barriers to attendance.

- Based on feedback, children taking part in YorNight attend at least 84 local and regional schools[13]
- Postcode data (from an online survey with 223 responses) indicated that 20% of attendees live in low participation neighbourhoods[14]

"The event encourages children to learn something new and inspires them to keep learning. Many of the children said they wanted to be scientists when they grow up which was great to see. It was particularly excellent to see so many young girls inspired by science." Participating researcher

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[11] See Appendix C for a list of marketing activities
[12] For a breakdown of how attendees heard about the event, please see Appendix D
[13] See Appendix E for all schools listed by respondents to the feedback survey
[14] See Appendix F for the geographic distribution of attendees

Developing transferable skills

For participating researchers, YorNight offered an opportunity to engage with the public and present their research in new and exciting ways. Feedback after the event indicates the majority of participants learned something new, with many noting the two-way nature of engagement. Communication skills and increased confidence were most frequently cited.

While 41% of those participating in YorNight had a great deal of public engagement experience, 43% had very little and 16% none. Training was offered by the University's Research Excellence Training Team ahead of the event, with feedback showing the majority of those taking up this opportunity found it useful.[15]

A survey of participating researchers showed that:

- 100% enjoyed the event[16]
- 95% felt YorNight was valuable (the remaining 5% responded that it 'may be' valuable)[17]
- 63% felt they had learned something from participating[18]
- 74% intend to take part in a future YorNight event (a further 21% might take part)
- 80% intend to get involved with other public engagement events (a further 19% may get involved)

"You learn to convey your research in a different way than in an academic environment, and it's really rewarding to listen and communicate with people that ask different kinds of questions." Participating researcher

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[15] Eight respondents had attended the training: 7 gave positive feedback (such as *"The training was a good opportunity to think about what the public would get from the event"*, *"Streamlined and good notes"*, *"It was really informative and provided enough resources to practice before the event"*) and one had reservations. It was usefully suggested that examples of activities from previous years would be a helpful addition.

[16] Appendix G details comments from survey respondents on enjoyment of the event

[17] Appendix H details comments from survey respondents on the value of the event

[18] Appendix I details the skills learned by contributors

One Planet Living

As an institution with both local roots and global reach, and at the leading edge of research and knowledge, sustainability is a key element of the University of York's responsibilities and values.

Travel and transport
Everyone attending YorNight 2020 was encouraged to arrive on foot, by bicycle or by public transport wherever this was possible.

Based on 757 responses (voting using tokens):

- 50% of attendees walked or cycled to the event
- 35% of attendees came by car
- 16% used public transport

Publicity materials and merchandise
All the paper used in YorNight marketing materials was fully recyclable, FSC accredited and from sustainable forests. Promotional materials included pencils made from approximately 30 per cent recycled denim and 70 per cent recycled polystyrene, and rulers made from very thin recycled polypropylene. Balloons were not provided.

Recycling
York Barbican's partner Yorwaste collects bins from the venue, and sorts and recycles accordingly. Non-recyclable waste is processed and turned into energy as the venue aims not to send anything to landfill.

Attendees were encouraged to bring a refillable drinking bottle with them on the day and free drinking water was available.

Looking to the future

We are constantly striving to improve the quality of experience for both our audience and presenters. We received some excellent suggestions from both attendees and participating researchers and will incorporate many of these into future events.

The event was extremely successful but consequently very busy for attendees and participating researchers alike. Suggestions to improve this included:

- Staggered entry times for visitors to reduce crowding
- Extending the opening hours of the event
- Considering whether a larger venue is an option
- Pre-bookable tickets for some elements of the event
- Facilitating breaks for presenters with more refreshments available throughout

We want YorNight to be accessible to all and welcomed suggestions to support those with additional needs. These included:

- Dedicated quiet room for visitors
- Disability hour with easier access to stalls and a quieter environment

Activities were well-pitched for the target family audience[19]. Suggestions to enhance this included:

- Different areas for for older and younger children (e.g. under and over 8s)
- Craft areas with lower tables and chairs
- Child-friendly talks, perhaps with cushions on the floor for small children
- Clear age recommendations on activities
- Adult only opening times to allow those without children to engage with activities

In addition, the current pandemic will have implications for future family engagement events which will need to be considered very carefully to ensure a safe and enjoyable experience for all.

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[19] 88% of respondents were satisfied or very satisfied with the activities on offer (55% very satisfied and 33% satisfied), 7% were neither satisfied nor dissatisfied, 5% were dissatisfied or very dissatisfied (3% dissatisfied and 2% very dissatisfied).

Appendix A: Attendee views on research and researchers

61% of attendees stated that their views on research/researchers had been changed by the event. Of those who commented regarding how their views had changes, all were positive:

- 17% stated that research was more varied than they had thought:
    - *"Had no idea the areas of research would be so varied."*
    - *"The breadth and depth was eye opening."*

- 15% found research more interesting:
    - *"Much more interesting than I expected."*
    - *"Opened my eyes to how much they [researchers] do and how interesting it can be."*

- 15% commented positively on the researchers:
    - *"It made them [the researchers] approachable and human (not all boffins if that makes sense?)"*
    - *"It was nice to see and interact with researchers to learn about their personalities."*
    - *"Researchers are far more accessible and easier to talk to than I thought."*

    Researchers were described as cool, encouraging, friendly, professional, important, creative, approachable, hard-working, inspiring, passionate, knowledgeable, patient, extroverted, dedicated, "not so geeky" and enthusiastic. It was also observed that they were of different ages and didn't all wear white coats.

- 10% thought that research was more exciting or fun
    - *"Research can be fun and interactive."*
    - *"It made it more visible that many exciting things were being researched."*

- 10% learned more about research and researchers:
    - *"It was excellent to understand what they [researchers] do and why related to different topics."*
    - *"I suppose I haven't really spoken to my children about the role of researchers but it opened discussions of what they do and that there is so much out there to find out."*

- 6% found research more accessible than they had anticipated:
    - *"That it's accessible for all ages to understand."*
    - *"I love that they are sharing their work with the public and finding ways for children to access it :)"*

- 6% commented on how well the researchers had engaged them and their children:
    - *"They [researchers] brought it [research] to life, loved the enthusiasm."*
    - *"Enthusiasm of the demonstrators was infectious...even the little ones were absorbed."*

- 5% were personally influenced on their career or education:
    - *"I wish I was a scientist/researcher and would encourage my children to consider it as a career."*
    - *"I would like to become a scientist."*
    - *"It opened up ideas and possibilities of things for my eldest to consider following at university."*
    - *"Great for chance to see future job opportunities in science."*
    - *"I've never thought about the psychological aspect of graffiti before. I went away and researched it myself."*

- 3% thought research was more relevant to the 'real world' than previously:
  - *"It made research more accessible and appropriate to our lives."*
  - *"Much more positive - and real life application."*
  - *"More achievable and down to earth."*

- 2% felt that research was important:
  - *"I've realised it is much more important to concentrate on research for a better world."*

- 2% commented that they found research and researchers aspirational:
  - *"It was nice to see the researchers teaching the children what they were doing and can aspire to."*

- 12% gave other positive comments

Of the 39% who stated that their views had not been changed, comments indicated that the respondents already had positive views on research and researchers - in some cases because they were researchers themselves (27% of 'No' comments):

- *"I knew they [researchers] were talented and enthusiastic already."*

- *"Always believed research is necessary and valid."*

- *"We've always respected researchers and their work."*

- *"We already thought it [research] was amazing."*

- *"I am researcher myself and I always think it's fascinating."*

- *"I'm already a bit advocate for the research done by the university and its impact on local and global matters."*

- *"I am a researcher myself and I know how important is the role and its impact on the future of mankind."*

- *"Still impressed with the research and researchers at University of York."*

- *"Always knew they [researchers] were incredibly enthusiastic about their subject!"*

- *"I did some research 20 years ago, but I was amazed at how many different subjects there were and the enthusiasm from the researchers!"*

- *"I've always been inspired by researchers & work they do. So this event didn't change that but affirmed it."*

- *"I'm a researcher myself but my children did learn lots of new things."*

- *"They [the researchers] were very friendly and engaging, good ambassadors for the Uni."*

- *"I already had a great respect and possibly envy of them, and this was strengthened by the event."*

- *"We already love research and appreciate all the great work researchers do."*

Appendix B: Additional audience feedback

Responses to questions about what respondents most enjoyed or liked about the event. Responses giving particular activities are shown in the word cloud on page 6.

- *"The children and us have learnt so much."*

- *"It was an inspiration. I learned new and interesting things and it was also fun."*

- *"Lots of brilliant projects and really interesting people."*

- *"The range of researchers who were passionate about their subject."*

- *"Seeing the kids so involved in educational activities. They have not stopped smiling the whole time!"*

- *"Interactive experiments. Obvious enjoyment and impressive knowledge of the staff involved in the information tables and experiments."*

- *"Different experiences; applications of science and research to everyday. Love the enthusiasm of the researchers."*

- *"The variety of research on display and the way it engaged and inspired children."*

- *"The variety of displays - the enthusiasm of the staff and the clarity of their explanations."*

- *"Free family event, great to have something for children 7+ (lots of family events for younger children)."*

- *"Hearing passionate young people talk about their subjects and engage with kids."*

- *"Lots of people happy and willing to demonstrate and talk about their fields."*

- *"Variety hands on activities for children with bite size amounts of information."*

- *"The variety of the topics provided, different experiences, knowledgeable people talking about their passions."*

- *"The range of subjects covered and the engagement between the students and the children who were really engaged and absorbed in learning about things."*

- *"I was very impressed how most researchers had managed to turn their research into an interactive learning session, and how most of the stalls appealed to both children and adults."*

- *"The enthusiasm of the teams, both for their subject and their willingness to engage with the children and pass on their enthusiasm for STEM subjects."*

- *"Something for everybody, great for my grandchildren to speak to and be involved with research scientists and the whole science experience."*

- *"Quality and range of activities, fascinating for the adults and kids alike."*

- *"Everything, from the efforts of all the researchers presenting their work to the originality to engage children to science."*

- *"Great for the children to talk to the scientist and engage in experiments."*

- *"How happy my children were by something educational - they have told anybody who listens about what they gave learnt."*

- *"Learning new things first hand from people who were really excited about them."*

- *"It was free, local and very hands on for kids."*

- *"The number of different activities free for children and the brilliant students and staff from the university who were really good with the children."*

- *"The variety of things to do and the interactions with real scientists!"*

- *"Learning new things in an accessible and interesting way, from the people doing the research."*

- *"Being able to explore topics with my daughter that I'm less confident to teach her and being met with facilitators on the stalls keen to engage us."*

- *"Great to see so many female scientists as I have two daughters."*

- *"An excellent event for adults and children alike!"*

- *"The children's hands-on activities were great fun. My 9-year-old is wanting to look at the brain and function since being involved."*

- *"This was an AWESOME event and we loved every minute! Thanks so much :)"*

- *"Nowhere else have we ever had the opportunity to eat a cricket!!! My 4-year-old loved making her play dough solar system which she took to school for show 'n' tell. My 10-year-old enjoyed the range of exhibits and the VR demonstration."*

- *"Overall an excellent event from which my children took home lots of new information!"*

- *"Thank you for a great event. As a family we really appreciated that it was free."*

- *"Science and maths can be interesting and fun if presented and taught well."*

Appendix C: Marketing activities

Paid Advertising:

- *Local Link* advert
- Minster FM advert
- *Mumbler* blog
- *Families Vale of York* Enhanced What's on Listing
- *Little Vikings* newsletter

Other advertising/marketing activities:

- *Local Link* advertorial
- Two Visit York listings advertising the family events and Science Cabaret
- 7 Days in York (Make it York weekly email)
- Posters on No 66 bus x13
- *Primary Times* What's on Listing
- Advert in University of York Open Lectures leaflet
- Where can we go? online listing
- Fox Lane Books displayed cards advertising YorNight at events attended
- York Barbican mailing list
- City of York Council – included in *Our City* newspaper, weekly staff newsletter and intranet
- Media release sent out
- BBC Radio York piece
- Posters and DL flyers displayed outside and inside the Barbican, as well as at York libraries and the tourist information centre
- DL leaflets delivered door-to-door in target areas (near the Barbican, Bishopthorpe Road and Tang Hall)
- University website homepage advert; staff and student homepage adverts
- Staff Digest
- University Payslip advert
- Graduate Students' Association (GSA) and University of York Students' Union (YUSU) newsletters
- Email message to University of York alumni
- Email messages sent to York St John University, York College, the local education authority, and local schools (many schools then advertised the event in their newsletters)
- Messages sent out via local Scouts and Guides groups
- University's Widening Participation team helped disseminate information

Appendix D: How attendees heard about the event

Social media (Facebook/Twitter/Instagram)	28%	Where stated, 96% referenced Facebook (rather than Twitter or Instagram)
Word of mouth	16%	Participating researchers, friends and family members all referenced
University of York (website and/or staff digest)	16%	Where stated, 40% referenced the Staff Digest and 60% the University website
School	9%	
UoY mailing list (Family events/Festival/Open Lectures)	9%	
Online	4%	
Poster/flyer	3%	
Local Link	3%	
Through a Scouting/Girlguiding group	3%	
York Mumbler	3%	
York Press	2%	
York Barbican Website	1%	
Little Vikings	1%	
Eventbrite	1%	
7 days in York e-news	1%	
Visit York	1%	
Minster FM	<1%	
What's On in York	<1%	

Appendix E: Schools data

A list of the schools attended by those completing the online feedback form is given below.

Five schools (highlighted in the data below) received money-off vouchers for food at the Barbican:

- Hob Moor Community Primary Academy
- St Aelred's Catholic Primary School
- Tang Hall Primary School
- Westfield Community Primary School

and

- Year 7-9 students at Archbishop Holgate School who met widening participation criteria.

In addition to the vouchers, Katherine Leech (Events team) gave a promotional assembly in St Aelred's Catholic Primary School prior to the vouchers being distributed.

Six of these vouchers were redeemed: Five from St Aelred's Catholic Primary School and one from Hob Moor Community Primary Academy.

The average percentage free schools meals of the schools listed (calculated per child attending) is 8.0%. This compares to a national average of 13.6%[20]

School Name	Number of Pupils attending YorNight	Primary / Secondary	Private / State	School Type	% eligible for free school meals
Acomb Primary School	4	Primary	State	Academy	9.4
All Saints RC School, York	1	Secondary and 16-18	State	Voluntary Aided School	7.2
Appleton Roebuck Primary School	1	Primary	State	Academy Converter	2.7
Archbishop Holgate's School	8	Secondary and 16-18	State	Academy	12
Archbishop of York's CofE Junior School	2	Primary	State	Voluntary Controlled School	3.2
Aspin Park Academy, Knaresborough	2	Primary	State	Academy converter	6.7
Badger Hill Primary Academy	1	Primary	State	Academy converter	13.5
Barkston Ash Catholic Primary School	1	Primary	State	Voluntary Aided School	3
Barlby High School	1	Secondary	State	Academy Converter	9.4
Barlby Community Primary School	1	Primary	State	Community School	5.9
Bishopthorpe Infant School	1	Primary	State	Community School	1.2

[20]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/719226/Schools_Pupils_and_their_Characteristics_2018_Main_Text.pdf

School Name	Number of Pupils attending YorNight	Primary / Secondary	Private / State	School Type	% eligible for free school meals
Bootham School	1	Primary, Secondary and 16-18	Private	Independent School	0
Bramham Primary School	1	Primary	State	Community School	5.5
Carlton Primary School, Wakefield	1	Primary	State	Community School	7.5
Carr Infant School	1	Primary	State	Community School	15.9
Carr Junior School	4	Primary	State	Academy Converter	17.6
Cawood Church of England Voluntary Aided Primary School	2	Primary	State	Voluntary Aided School	1.8
Clifton Green Primary School	2	Primary	State	Community School	27.6
Clifton with Rawcliffe Primary School	3	Primary	State	Academy converter	3.9
Copmanthorpe Primary School	1	Primary	State	Community School	2
Driffield School	1	Secondary and 16-18	State	Academy Sponsor-led	15
Dringhouses Primary School	5	Primary	State	Community School	4.5
Easingwold Community Primary School	1	Primary	State	Community School	17
Elvington CofE VC Primary School	1	Primary	State	Voluntary Controlled School	1.5
Escrick Primary School	1	Primary	State	Voluntary Controlled School - became an Academy Converter Aug 2020	1.3
Fishergate Primary	6	Primary	State	Community School	10.9
Forest of Galtres Primary School	2	Primary	State	Academy Converter	3.9
Fulford School	8	Secondary and 16-18	State	Academy Converter	2.9
Headlands Primary, Haxby	5	Primary	State	Community School	4.3
Hempland Primary School	4	Primary	State	Academy Converter	3.1
Heworth Church of England Primary Academy	1	Primary	State	Academy Converter	12.9
Hob Moor Community Primary Academy	1	Primary	State	Academy Converter	27.6
Hob Moor Oaks Academy	1	Primary	State	Academy Special Converter	21.6

School Name	Number of Pupils attending YorNight	Primary / Secondary	Private / State	School Type	% eligible for free school meals
Home educated	2		N/A		
Huntington Primary Academy	2	Primary	State	Academy Converter	3.4
Huntington School	1	Secondary and 16-18	State	Community School	8.6
Joseph Rowntree School	3	Secondary and 16-18	State	Voluntary Controlled School	12.9
Kilham Church of England Voluntary Controlled School	2	Primary	State	Voluntary Controlled School	17.2
King James's School, Knaresborough	1	Secondary and 16-18	State	Community School	10.1
Kirk Fenton Primary, Church Fenton	1	Primary	State	Academy Converter	5.8
Kirk Hammerton Church of England Primary School	1	Primary	State	Voluntary Controlled School	0
Knavesmire Primary School	9	Primary	State	Academy Converter	5.2
Lord Deramore's Primary School	2	Primary	State	Voluntary Controlled School	7.8
Malton Community Primary School	1	Primary	State	Community School	20.3
Malton School	1	Secondary and 16-18	State	Community School	9.9
Manor Church of England Academy	2	Secondary	State	Academy Converter	6.5
Millthorpe School	7	Secondary	State	Academy Converter	9
The Minster School	2	Primary and Secondary	Private	Independent School	0
Our Lady Queen of Martyrs Catholic Primary School	1	Primary	State	Academy Converter	7.6
Osbaldwick Primary	2	Primary	State	Academy Converter	15.3
Poppleton Ousebank	6	Primary	State	Academy Converter	3.7
Poppleton Road Primary	3	Primary	State	Community School	15.1
Ralph Butterfield Primary School	1	Primary	State	Community School	6.6
Robert Wilkinson Primary Academy	1	Primary	State	Academy Converter	4.2
Rufforth Primary School	1	Primary	State	Academy Converter	5.4
Sale Grammar School	1	Secondary and 16-18	State	Academy Converter	2.8
Scarcroft Primary	3	Primary	State	Academy Converter	9

School Name	Number of Pupils attending YorNight	Primary / Secondary	Private / State	School Type	% eligible for free school meals
Selby High Specialist School for the Arts and Science	1	Secondary	State	Community School	12.5
Settrington All Saints' CofE VC Primary School	1	Primary	State	Voluntary Controlled School	6.5
South Hunsley School and Sixth Form College	1	Secondary and 16-18	State	Academy Converter	4.2
St Aelred's Catholic Primary School	5	Primary	State	Academy Converter	18.4
St Benedict's Roman Catholic Primary School	1	Primary	State	Academy Converter	5.1
St Francis Xavier School – a Joint Catholic and Church of England Voluntary Academy	1	Secondary	State	Academy Converter	6.3
St George's Catholic Primary School – A Catholic Voluntary Academy	3	Primary	State	Academy Converter	14
St Leonard's, Fife	1	5-18	Private	Boarding	0
St Mary's Primary, Askham Richard	1	Primary	State	Voluntary Controlled School	1.9
St Oswalds CE Primary School	3	Primary	State	Voluntary Controlled School	4.6
St Paul's CE Primary School	4	Primary	State	Voluntary Controlled School	12
St Wilfrid's Catholic Primary School	7	Primary	State	Academy Converter	4.4
Stamford Bridge Primary	1	Primary	State	Academy Converter	5.5
Stockton-on-the-Forest Primary School	1	Primary	State	Community School	6.3
Terrington Hall School	1	Primary and Secondary	Private	Independent School	0
Totley All Saints, Sheffield	1	Primary	State	Academy Converter	6.1
Warthill Church of England Voluntary Controlled Primary School	1	Primary	State	Voluntary Controlled School	0
Westfield Community Primary School	2	Primary	State	Community School	23.1
Wheldrake with Thorganby CE Primary School	3	Primary	State	Academy Converter	2.3
Wigginton Primary School	2	Primary	State	Community School	6.7
Wilberfoss Primary	1	Primary	State	Voluntary Controlled School	4.8

School Name	Number of Pupils attending YorNight	Primary / Secondary	Private / State	School Type	% eligible for free school meals
Woodthorpe Primary School	1	Primary	State	Academy Converter	17.3
Wykeham CE Primary School	1	Primary	State	Voluntary Controlled School	6.3
Yearsley Grove Primary	1	Primary	State	Community School	20.1
York College	1	16-18	State	General Further Education College	N/A
York Steiner School	5	Primary and Secondary	Private	Independent School	0

Appendix F: Geographic distribution of attendees

Maps indicating the distribution of attendees based on respondents to the online survey.

 indicate postcodes in low participation areas

 indicate other postcodes

Figure 3: All postcodes submitted

Figure 4: Regional postcodes

Figure 5: Central York postcodes
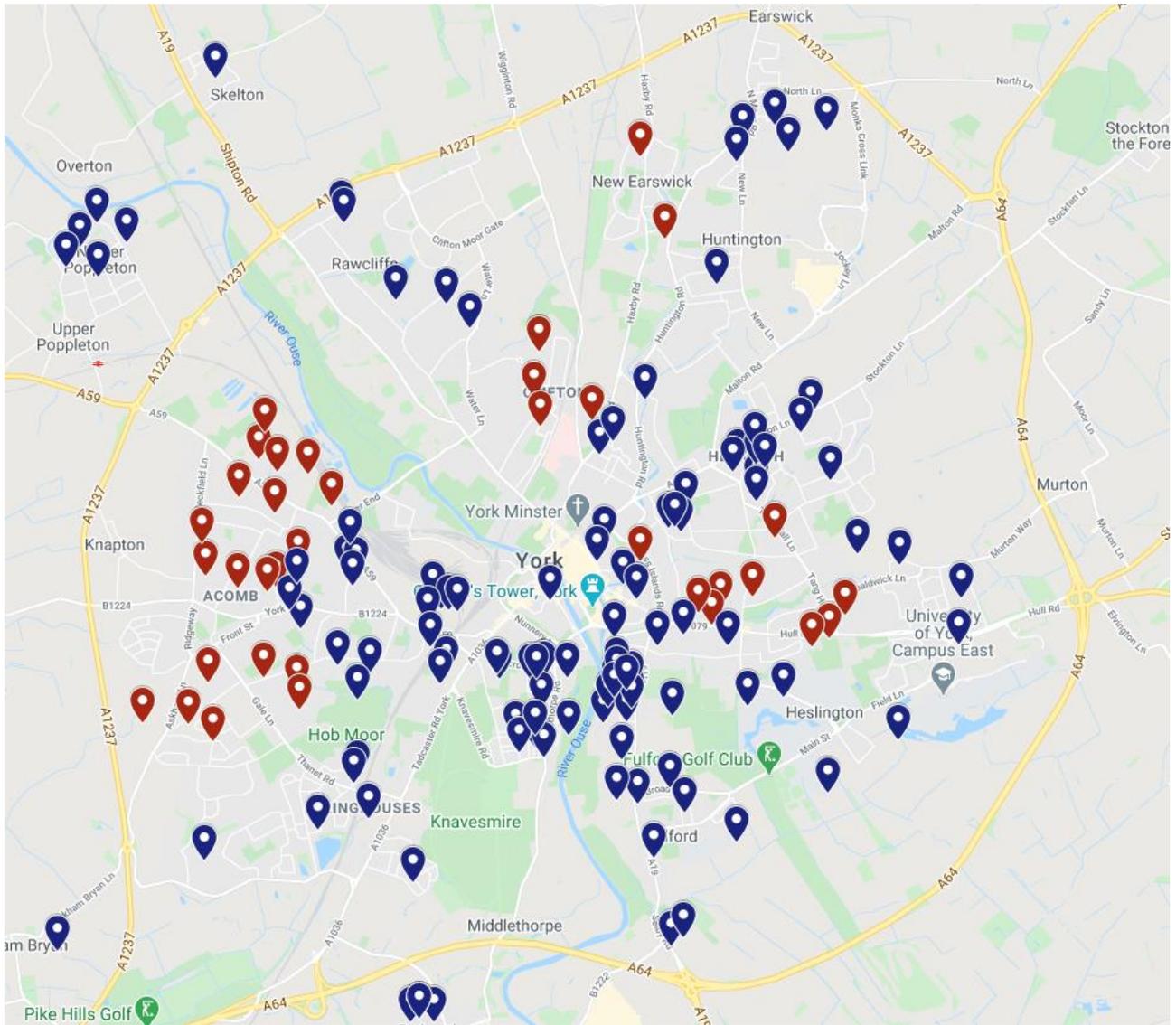
Appendix G: Contributor views on enjoyment of the event

100% of respondents enjoyed participating in the event. 67 respondents added comments that can be categorised as:

- It was fun to engage/interact with the public:
    - *"It was a lot of fun and people who came to the stall were still very excited about what we had."*
    - *"I always enjoy meeting and talking to people. The enthusiasm of the families who came was wonderful."*

- That there was a high level of interest/engagement from the public/lots of good questions:
    - *"Very engaging and a brilliant amount of interest and questions from the public."*
    - *"Everybody I engaged with were really engaged with the event and were inquisitive and interested in talking about what they had seen."*

- That it was rewarding to contribute to people's learning
    - *"Nice seeing the shared curiosity of parents and children alike in science, and to be able to contribute to teach them both something."*

- That's it was enjoyable to see the enthusiasm of kids:
    - *"I love explaining what we do to kids and seeing what interests them. There were so many, the time went by quite quickly."*
    - *"I loved seeing all the kids enjoy the experiments we had prepared for them."*

- They enjoyed sharing their passion for their subject/research:
    - *"It's great getting to get the public enthusiastic about what you're enthusiastic about."*
    - *"I really enjoyed speaking to lots of different people of all ages about science I am passionate about."*

- That the event was well-organised:
    - *"It was really well organised! I appreciated being sent the room layout and schedule which included a lot of detail beforehand. It also made us very comfortable that we knew where all refreshments would be and that we could usually see multiple members of staff to ask for help at all times. I specifically liked the layout this year as it was easier to move around that when the event was at King's Manor. Additionally I liked that the talks were separate from the stalls so that people could pick and choose which bit they wanted to do when."*
    - *"I find public outreach enormously rewarding. The event was so well organised that we could get on with talking about the science without handling complaints and questions about where the toilets are."*

- It helps with research to see the 'bigger picture':
    - *"It is a way to not only showcase our research but also a way to "force" us to see why what we do matters (particularly since we study a very mundane topic), and especially because talking to people makes us see what it is that the public values about our research."*

Appendix H: Contributor views on the value of the event

Reasons given by contributors regarding why the event was valuable included value to the researcher, the York community more broadly, and to individual attendees. Comments fell into the following areas:

- Enhanced skills of the individual/team presenting (see also Appendix I):
  - *"You learn to convey your research in a different way than in an academic environment, and it's really rewarding to listen and communicate with people that ask different kinds of questions."*

- Gave a different perspective on the research to the researcher:
  - *"The activity has helped me to think about my research in a different way and will be useful as a pilot activity for future engagement workshops."*
  - *"It forced me to think about the work I do and how the public would view it."*

- Promoted a positive view of the University of York:
  - *"I think it was important for the University's community profile, and also the general public's access to scientific research. I have had several people since tell me that they went and enjoyed."*

- Gave an opportunity for researchers to engage non-academic audiences, often involving discourse that influenced/directly contributed to the research:
  - *"It allows us to meet with groups of people who might not have been involved in research before, and means they can get involved in anything we are doing if they would like."*
  - *"It sharpened some of our research questions, clarified how we could re-run this in future and it seemed to give people something to think about."*

- Highlighted the importance of research/encourages public interest in research:
  - *"It's very important to get our research out there, give people the chance to see what we are up to and to learn something new in a fun/engaging way."*
  - *"I think it shows well what the university is doing and why funding research is important to the adults, and to the children it's a lot of fun and perhaps some inspiration for future. As a female scientist, I was very happy to encourage girls, who often were much more shy, to go and try things and show them that they can be scientists too. I really wish somebody showed me that when I was in their age…"*

- Provided a learning opportunity for the public and contributed to building a scientifically literate public:
  - *"It gave a free opportunity to anyone who wanted to learn, which I really support."*

- Encouraging young people to engage with science/research and potentially pursue a career in this:
  - *"It provides a real face for science and lets kids see themselves in researchers."*
  - *"It gives the public, especially children, a good concept on real life research and its impact in their lives and if it is something they may wish to do later in life."*
  - *"The event encourages children to learn something new and inspires them to keep learning. Many of the children said they wanted to be scientists when they grow up which was great to see. It was particularly excellent to see so many young girls inspired by science, as when I was a young girl, science seemed to be more of a boys thing. This was further encouraged by the presence of many female scientists helping out at Yornight."*

- It was fun for the audience
  - *"It looked like a wonderful family day out, and the activities were wide ranging and imaginative."*

Appendix I: Skills development of contributors

63% of respondents stated that they had learned something from participating in the event. Of these:

- 44% stated improved communication skills with a further 20% stating that they were better at tailoring their explanations to different audiences:
    - *"I developed my skill at engaging with a range of age groups and knowledge levels."*
    - *"I think I have been able to develop my communication and dissemination of knowledge skills. It allowed me to practise explaining concepts in a concise and engaging way."*
    - *"I learned about pitching my research to a younger audience."*

- 16% reported increased confidence with 4% gaining leadership skills:
    - *"I developed my confidence of speaking to people and leading activities"*
    - *"As it was my first time really involving myself like this, it showed me how to properly interact and encouraged me to be more confident."*

- 10% gained subject knowledge in their subject/research area and a further 4% learned about other University of York research areas:
    - *"As a first year I wasn't aware of a lot of the research being done within the department by post-docs, but it was incredibly interesting to learn more."*

- 6% learned how to improve their activity and 6% also learned specifically from the audience:
    - *"I became more aware of usability issues / bugs in the game I made, partly because children are more creative and they will interact with the computer in unexpected ways (e.g. clicking where they aren't supposed to click). I've realized that testing with children is a great way of making sure a software product or a game has an acceptable level of usability."*

- 6% developed their planning skills and a further 2% felt that they had improved their ability to work under pressure:
    - *"Our lab learned some practical lessons about how to organise our stall - we could have done with arranging more volunteers!"*