



COVENTRY &
WARWICKSHIRE
10–13 SEPTEMBER 2019

Evaluation report

Questions about the report? Please contact festival@britishscienceassociation.org

A partnership between:



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Contents

1.	Executive summary	3
	1.1 About this report.....	3
	1.2 Evaluation data	3
	1.3 Evaluation process.....	3
	1.4 Findings at a glance.....	3
2.	Introduction.....	5
	2.1 The British Science Association	5
	2.2 The British Science Festival.....	5
	2.3 British Science Festival 2019.....	5
3.	The Festival model	6
	3.1 Aims and Objectives.....	7
4.	Findings.....	10
	4.1 Aim 1: Establish University of Warwick as a world class research institution.....	10
	4.2 Aim 2: Establish the BSA as a leader in science engagement in the UK science festival scene	10
	4.3 Aim 3: Establish a legacy for science engagement in Coventry and facilitate lasting relationships between the University, researchers, partner organisations, sponsors and local community.....	13
	4.4 Aim 4: Reinforce 'Engaged' audiences' science identity	15
	4.5 Aim 5: Encourage 'Inactive' audiences' to feel more connected to science	16
	4.6 Aim 6: Encourage active researcher /speakers ('Professionals') to value and participate in public engagement.....	19
	4.7 Aim 7: Attract diverse attendees to the Festival.....	20
5.	Conclusions.....	24
	5.1 Recommendations for 2019	25

1. Executive summary

1.1 About this report

This report presents the findings of the evaluation of the British Science Festival 2019 and resulting conclusions and recommendations for the future.

The report details the work undertaken for the evaluation and presents findings in relation to the Festival aims, objectives and measures of success.

The analysis is based on data gathered via audience and stakeholder questionnaires, and a review of programme documents and data supplied by delivery partners.

1.2 Evaluation data

Evaluation data for this report has come from various sources:

1. Data about the number of people in attendance is by observation by Association staff, Festival assistants and event organisers. Where this data was unavailable, figures were calculated using the number of people booked into events and the average drop-out rate.
2. Audience Questionnaires completed by Festival attendees which include demographic questions and questions about their experience of the events they attended.
3. Demographic questionnaires completed by Festival attendees focussing on the backgrounds of people attending events.
4. Short interviews were also conducted with attendees at specific events.
5. Speaker data was based on forms completed by event organisers before and after the Festival.

1.3 Evaluation process

We evaluated all 105 standalone events open to public audiences and received a total of 4,287 feedback forms from attendees at the public events. In general, bookable events such as lectures, panels and in-conversations were evaluated using self-complete paper evaluation forms while drop-in events were evaluated using fieldworkers conducting on-the-spot interviews.

During the drop-in event interviews, attendees who were identified as 'Inactive' on the [British Science Association audience model](#) were asked additional questions to gain further insight into their relationship with science. All evaluation data received will inform programme decisions for next year's Festival where we hope to increase representation of such audiences in particular in line with the [BSA's mission and vision](#).

1.4 Findings at a glance

1.4.1 Programme content

- There were 105 standalone events, including an additional 23 activities (resulting in 128 events and activities in total) involving 221 speakers and facilitators
- 88% of events took place on the University of Warwick campus, the remaining 12% took place in venues across the Coventry city centre
- Across the whole programme, 18% of events and activities were "officially" organised by University of Warwick academics although overall 35% involved University of Warwick academics in some way

- Out of all Festival events and activities, 26% were organised by the BSA's Scientific Sections, 16% came through the Open Call and 43% were organised by the BSA
- There were 8 community-organised events and 5 events for invited audiences such as stakeholders, education professionals and media
- Of the Festival speakers surveyed, 54% identified as Female, 45% as Male, and 2% as Trans/Non-binary

1.4.2 Festival impact

- 16,910 people were reached through bookable and drop-in events and 12,985 tickets were booked
- Awareness: 86% of respondents were more aware of current scientific research after attending a Festival event
- Experience: Satisfaction rates from attendees were very positive with a 92% of respondents rating events as excellent or good
- Interest: 70% of respondents felt more interested in science after attending a Festival event and 88% stated that they were more likely to look out for and attend science events and activities

1.4.3 Audience demographics

Audience demographics have been calculated from unique respondents to Festival events.

- Age: 45% were aged between 16 and 34, which is the target audience for the Festival
- Gender: 56% identified as Female, 41% as Male, 1% preferred to self-identify and 2% preferred not to say
- Ethnicity: 77% identified as White/White British, 11% as Asian/Asian British, 2% as Black/Black British, 4% as Mixed/multiple ethnic background, 1% preferred to self-identify and 4% preferred not to say
- Disability: 7% considered themselves to have a disability and 90% did not, 3% preferred not to say
- Sexual identity: 81% identified as Heterosexual/Straight, 5% as Bisexual, 1% as a Gay man, 1% as a Gay woman/Lesbian, 2% preferred to self-identify and 10% preferred not to say
- Science identity: 50% stated that they did not work in a science related job and of those, 46% stated they were interested in science but make no particular effort to engage
- Location: 70% of attendees live in a Coventry/Warwickshire postcode area (CV)

2. Introduction

2.1 The British Science Association

[British Science Association](#) (BSA) is a charity with a vision to make science a fundamental part of culture and society. Its mission is to support, grow and diversify the community of people who are interested and involved in science. Our programmes, including the British Science Festival (BSF), give public audiences a platform to access and enjoy science and strengthen their influence over science's direction and place in society.

The Engagement team at the BSA organise a number of public programmes and events. The British Science Festival is one of the BSA's flagship programmes.

2.2 The British Science Festival

The [British Science Festival](#) (BSF) is Europe's longest-standing national event which connects people with researchers from across the scientific spectrum. Thousands of people come together to celebrate the latest developments in science and to engage in open discussion about issues that affect our culture and society.

Each September the British Science Festival transforms a different UK city into a vibrant celebration of science, engineering and technology.

2.3 British Science Festival 2019

The 2019 British Science Festival took place in Coventry and Warwickshire, in partnership with the University of Warwick. Taking place from 10-13 September, this was the first time the event had been held in the area.

3. The Festival model

Since 2015, the British Science Festival has had a refined target audience of adults with a broad interest in science. Building on the success in previous years, the 2019 Festival followed a similar model.

The audience types referred to in the aims and objectives are taken from the [BSA audience model](#) (Figure 1) which informs all of our programmes.

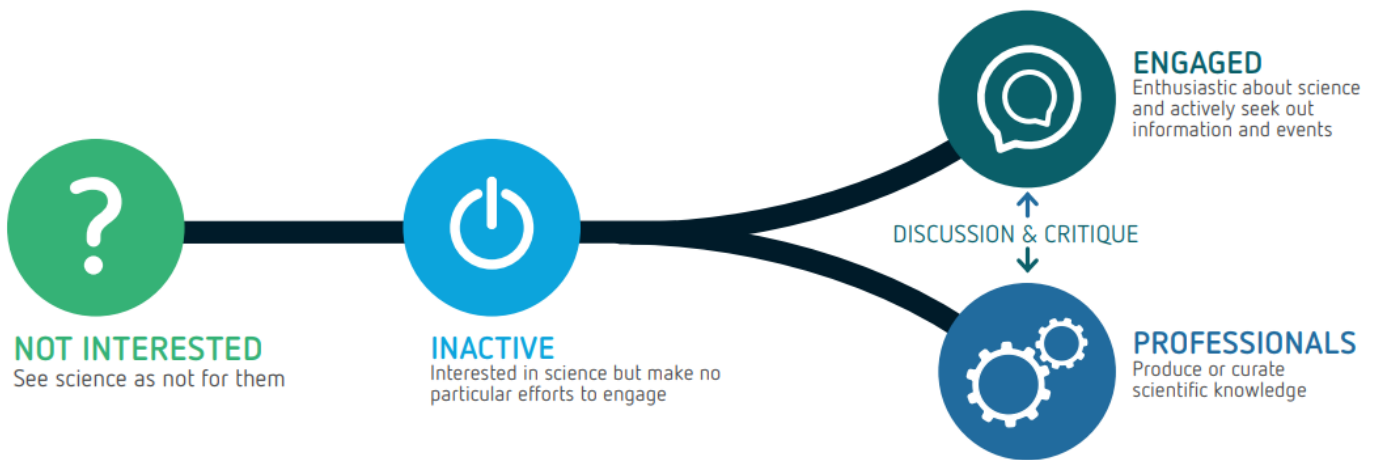


Figure 1. The BSA audience model.

3.1 Aims and Objectives

The below were jointly decided with the University of Warwick and British Science Association.

Aim 1: Establish University of Warwick as a world class research institution

Objectives:

- 1 Select leading University of Warwick researchers to showcase at the Festival.
- 2 Provide public engagement training opportunities for University of Warwick researchers.
- 3 Ensure University of Warwick researchers are present in the press programme.

Measurables:

- 25% of the Festival programme is made up of University of Warwick academics.
- University of Warwick events are rated as 'Excellent' or 'Good'.
- University of Warwick researchers have a positive experience of participating in the Festival.
- University of Warwick researchers have exposure to the media (this will be measured through the BSA's comms team Festival evaluation report).

Aim 2: Establish the BSA as a leader in science engagement in the UK science festival scene

Objectives:

- 1 The BSA will curate an innovative programme of over 100 events across the city that are aligned with the BSA's [vision](#).
- 2 People from Coventry, Warwickshire and across the UK will attend Festival events.
- 3 Attendees will have a positive experience of the Festival and feel more interested in and aware of science research after attending Festival events.

Measurables:

- The Festival is well received by attendees, local partners, the media and the sector.
- Reach an audience of 15,000 - 20,000 people.
- Majority of attendees report that events were 'Excellent' or 'Good'.
- Attendees report an increased interest and awareness in science after attending.
- A variety of UK science media report on the Festival and its events (this will be measured through the BSA's comms team Festival evaluation report).

Aim 3: Establish a legacy for science engagement in Coventry and facilitate lasting relationships between the University, researchers, partner organisations, sponsors and local community

Objectives:

- 1 Provide a positive experience for venues so that they will be open to hosting future science events.
- 2 Partner organisations will collaborate and develop relationships with researchers.
- 3 Provide a positive experience for (local) researchers, bringing them outside of the university campus, so they are open to expanding their range of engagement locations, activities and audiences in the future.

Measurables:

- Anecdotal feedback from researchers, partners, sponsors and venues.

- Researchers would recommend participating in the science festival to a colleague/friend.

Aim 4: Reinforce 'Engaged' audiences' science identity

Objectives:

- 1 'Engaged' attendees will have a positive experience of the Festival.
- 2 'Engaged' audiences attend multiple events.
- 3 Sixth formers (who are mostly likely to be in the 'Engaged' audience zone) will attend Festival events.

Measurables:

- The Festival attracts 'Engaged' audiences.
- 'Engaged' audiences have a positive experience of Festival events (e.g. they rate events as 'Excellent' or 'Good').
- 'Engaged' audiences attend multiple events.
- 'Engaged' audiences report a greater awareness of current research.
- Sixth formers will have a positive experience of Festival events.
- Sixth formers will report a greater awareness of current research.

Aim 5: Encourage 'Inactive' audiences' to feel more connected to science

Objectives:

- 1 'Inactive' audiences have a positive experience of Festival events.
- 2 'Inactive' attendees will feel more connected to science and more receptive to attending science events.
- 3 'Inactive' and 'Not interested' audiences will increase their interest in and understanding of science, and confidence in engaging with it, through active participation in events that are tailored for them.

Measurables:

- The Festival events attract 'Inactive' audiences.
- 'Inactive' audiences have a positive experience of the Festival (e.g. they rate events as 'Excellent' or 'Good').
- After attending a Festival event, 'Inactive' audiences are more interested in science and more likely to attend science events in future.
- 'Inactive' audiences are reached through local partnerships.

Aim 6: Encourage active researcher/speakers ('Professionals') to value and participate in public engagement

Objectives:

- 1 The BSA will provide diverse opportunities for active researchers (also referred to as speakers) to engage with the public.
- 2 The BSA will programme events that reflect the diversity of current research and the people involved.
- 3 Speakers will have a positive experience of the Festival.
- 4 Speakers will feel more confident engaging with the public and will engage with the public more frequently as a result.

5 Speakers will have increased awareness of public perspectives.

Measurables:

- Speakers would recommend participating in the science festival to a colleague/friend.
- Speakers who were not already very confident in engaging with the public before participating in the Festival report an increase in confidence with engaging the public with their research.
- Speakers are more likely to participate in public engagement activities.
- Speakers are more aware of the public's views on research.

Aim 7: Attract diverse attendees to the Festival

Objectives:

- 1 The BSF will reach audiences that represent the diversity of the local and national population.

Measurables:

- Audience demographics are representative of the local and national population.

4. Findings

The Festival programme was devised to meet the aims and objectives listed in Section 3. A number of measurables were used to assess the success of these aims and objectives, which the following section references.

4.1 Aim 1: Establish University of Warwick as a world class research institution

4.1.1 Objective 1: Select leading University of Warwick researchers to showcase at the Festival
Out of 71 proposals that were received from University of Warwick academics in the University of Warwick specific open call, 25 were selected to officially be organised by the institution at the Festival. Due to a variety of reasons 23 of the selected proposals resulted in actual Festival events. As a result, out of the 105 standalone Festival events, 22% were officially organised by the University of Warwick. However, overall 35% of the events and activities in the programme, which totalled 128, involved University of Warwick academics in some way.

Of the 23 events officially organised by the University of Warwick, 93% of attendees who responded to an evaluation questionnaire rated them as 'Excellent' or 'Good'. Likewise, the academics involved in these events rated their overall Festival experience as 'Excellent' or 'Good'.

4.1.2 Objective 2: Provide public engagement training opportunities for University of Warwick researchers

All academics who had been selected through the University of Warwick open call were given the opportunity to receive either group or 1-on-1 coaching from a public speaking and speech writing professional, external to the BSA. The majority of academics attended these sessions and anecdotal feedback from them suggested they found them beneficial when preparing their Festival events. Support from the BSA was also available throughout the process, including initial meetings to refine messaging and ad-hoc support when required thereafter.

Post-Festival event organiser feedback showed that 86% of University of Warwick academics who reported not being 'Very confident' with engaging with the public before taking part in the Festival said their confidence had increased as a result of participating in the event.

4.1.3 Objective 3: Ensure University of Warwick researchers are present in the press programme
This is measured by the BSA's comms team Festival media report.

4.2 Aim 2: Establish the BSA as a leader in science engagement in the UK science festival scene

4.2.1 Objective 1: The BSA will curate an innovative programme of over 100 events across the city that are aligned with the BSA's [vision](#)

In total there were 105 standalone events for public audiences, 88% of which took place on the University of Warwick campus and 12% in Coventry city centre, which reached 16,910 people. Activities that took place at larger events, such as The Botanist: late night garden, Late night fitness: raising the bar and FarGo Village takeover are not included in this number. When these activities are included, the number increases to 128 events and activities in total. Stakeholder events such as the Festival Dinner or the STEM in Education evening are not included in either of these counts.

Events were strategically programmed based on local audience interests, research taking place in the local area (as well as nationally) and previous Festival evaluation and feedback.

A core aspect of event development for the Festival is that content should be accessible for an adult audience with a general interest in science. Content generally ranges from lectures, to panel discussions, workshops, performances, games, installations and other playful, or unexpected formats. The aim being to position science away from the stereotypical image of the lab, conical flasks and goggles and to bring it more into a public sphere that a wide variety of people can relate to and want to engage with. Importantly, each year Festival events are new and repetition of content is avoided year on year. In 2019, events and activities ranged from discussions about youth activism and climate change, how humanity could vote if aliens made contact and what happens to your social media after you die, to live music performances including a 3D hologram show, and a variety of drop-in activities like the first ever adult mud-kitchen, and lots more.

Since 2015 when the Festival began functioning under a new model of targeting adult audiences (aged 16+), evidence from evaluation has suggested that evening events involving local venue partnerships and taking place predominantly in city centres reach a majority audience who identify as having an 'Inactive' relationship with science (see Figure 1 for BSA audience model). Therefore, each year, the Festival endeavours to focus on forming such partnerships to engage this key audience in the BSA's mission.

4.2.2 Objective 2: People from Coventry, Warwickshire and across the UK will attend Festival events

The majority of audience respondents (70%) had a Coventry and Warwickshire postcode ('CV') suggesting that the Festival was successful in reaching a local audience. From postcode data, it was clear that audiences also currently living across the UK, from as far as Scotland and Penzance, attended the Festival (Figure 2). A number of postcodes also originated from outside of the UK.



Figure 2. Map of the UK demonstrating the reach of the British Science Festival based on audience respondents' postcodes.

4.2.3 Objective 3: Attendees will have a positive experience of the Festival and feel more interested in and aware of science research after attending Festival events

The Festival was well received by respondents, 92% of whom rated events as 'Excellent' or 'Good'. They also reported that their awareness of current scientific research (86%) and interest in science (70%) had increased as a result of attending Festival events. Likewise, 88% stated that they were more likely to look out for and attend science events in the future.

Audience respondents used the words 'Interesting', 'Informative' and 'Thought-provoking' most commonly to describe events they attended, with 'Engaging', 'Fascinating', 'Inspiring' and 'Fun' following closely behind (Figure 3).

4.3.2 *Objective 2 / 3: Partner organisations will collaborate and develop relationships with researchers / Provide a positive experience for (local) researchers, bringing them outside of the university campus, so they are open to expanding their range of engagement locations, activities and audiences in the future*

Researchers from the University of Warwick were involved in a number of events involving local venue partnerships, outside of the University campus, including The Botanist: late night garden, The Albany Theatre and FarGo Village takeover. Anecdotal feedback from these academics suggest they had a positive experience and would be willing to be involved in future off-campus, non-typical science engagement activities:

"It was interesting presenting science at a bar/restaurant, the venue was good, not so many people earlier, but got busier later on. People were interested in the science & samples we had. We probably talked to 40-50 people, so we probably would have reached more people doing a more regular event, but it went well & was certainly worthwhile."

"I was very pleased with the event itself, and the support from the Festival organisers was excellent. When a panel member dropped out due to scheduling issues, the Festival had a replacement in mind, and quickly facilitated this. The new panellist was a great fit for the discussions."

"Planning for the festival enabled me to think through how to present my work to the public in different ways. The FarGo takeover was a great evening with a happy atmosphere and interested participants."

Overall, speakers and event organisers from and outside of the University of Warwick had a positive experience of the Festival, with 97% saying they would recommend contributing to the Festival to a friend/colleague. Positive anecdotal feedback was also received, which can be found below:

"I was very pleased with the event itself, and the support from the Festival organisers was excellent." – University of Warwick academic

"[...]this has been by far the best experience I have had with speaking at science festival/general public events. Throughout the whole time the focus has stayed on the science and not the show[...]" – Academic speaker

"As my first experience of the festival it was fantastic to visit and experience such a wide variety of topics. In addition, thank you for all your help getting [...] to the festival. It was great to have such a supportive network helping with the planning." – Event organiser

4.4 Aim 4: Reinforce 'Engaged' audiences' science identity

4.4.1 Objectives 1 / 2: 'Engaged' attendees will have a positive experience of the Festival / 'Engaged' audiences attend multiple events

'Engaged' audiences accounted for 26% of all respondents at Festival events (Figure 4). Of these, 90% rated Festival events as 'Excellent' or 'Good'. Their enjoyment of the Festival is mirrored by the fact that 66% attended multiple events (calculated based on if they ticked a box stating whether this was the first BSF 2019 evaluation form they had completed). The majority (87%) also reported an increased awareness of current scientific research.

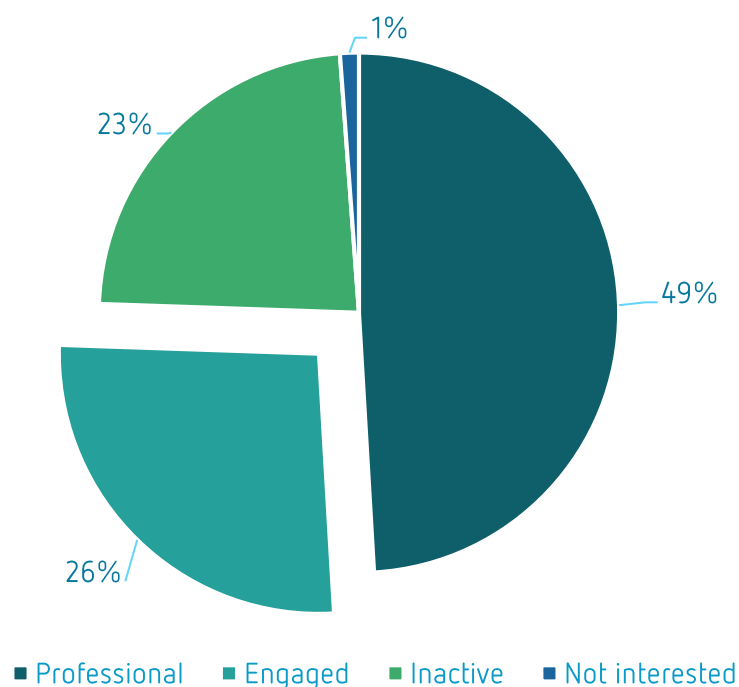


Figure 4. Pie chart showing the breakdown of Festival audiences' engagement with science before attending a Festival event, highlighting 'Engaged' audiences as per the [BSA's audience model](#).

4.4.2 Objective 3: Sixth formers (who are mostly likely to be in the 'Engaged' audience zone) will attend Festival events

To calculate sixth formers attendance to Festival events, all 16-19 year old respondents were included in the analysis. This age group accounted for 12% of all unique Festival attendees.

Contrary to expectations, the majority of 16-19 year old respondents studied science and therefore are classed as 'Professional' as opposed to 'Engaged' (Figure 5). This could partly account for why the Festival attracted a higher number of 'Professional' audiences in comparison to previous years as sixth former attendance was a key focus for the University of Warwick in 2019.

The majority of 16-19 year old respondents rated events as 'Excellent' or 'Good' and 92% reported an increased awareness of current scientific research.

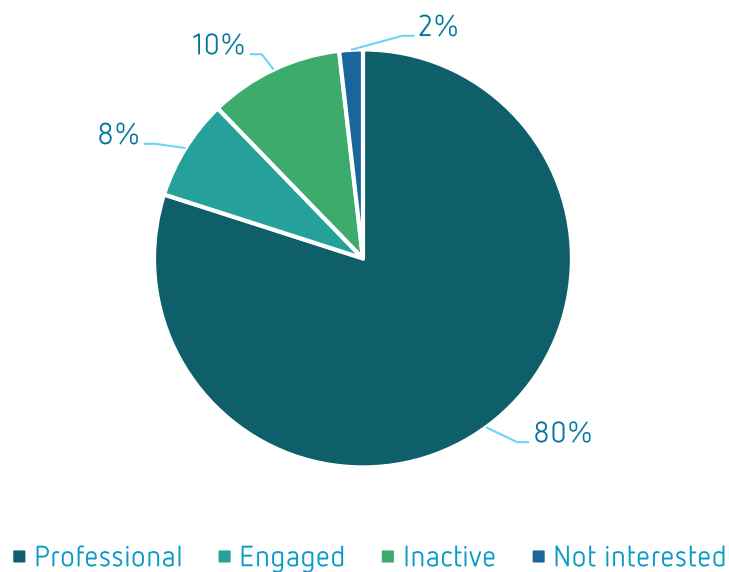


Figure 5. Pie chart showing the breakdown of 16-19 year old Festival audiences' relationship with science before attending a Festival event as per the [BSA's audience model](#).

4.5 Aim 5: Encourage 'Inactive' audiences' to feel more connected to science

4.5.1 Objective 1 / 2: 'Inactive' audiences have a positive experience of Festival events / 'Inactive' attendees will feel more connected to science and more receptive to attending science events

'Inactive' audiences accounted for 23% of all respondents at Festival events (Figure 6). Of these, 94% rated Festival events as 'Excellent' or 'Good'. The majority (78%) said they were more interested in science and 89% were more likely to look out for and attend future science events.

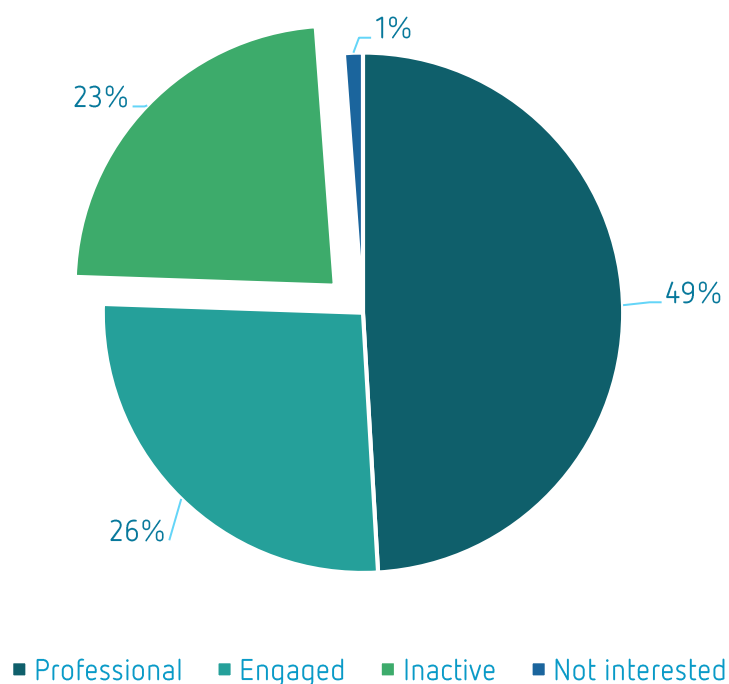


Figure 6. Pie chart showing the breakdown of Festival audiences' relationship with science before attending a Festival event, highlighting 'inactive' audiences as per the [BSA's audience model](#).

4.5.2 *Objective 3: 'Inactive' and 'Not interested' audiences will increase their interest in and understanding of science, and confidence in engaging with it, through active participation in events that are tailored for them*

Evening events in collaboration with local venue partnerships were used to target and reach 'Inactive' audiences. These events successfully attracted a larger proportion of 'Inactive' respondents in comparison to events that were on the University of Warwick campus (Figure 7). Local partnership events included those at The Botanist in Coventry city centre, Coventry Cathedral, FarGo Village, The Albany and Coventry Sports and Wellness Hub.

At the above events, 93% of 'Inactive' respondents rated them as 'Excellent' or 'Good'. Importantly, 90% said they were more likely to look out for and attend science events and activities in the future and 72% said their interest in science had increased. To understand more about these audiences' actions after attending a Festival event, respondents were asked if they would be happy to take part in a follow up interview 3 months after the Festival. Those who agreed will be contacted in the coming months.

Those who identified as having an 'Inactive' or 'Not interested' relationship with science at local venue partnership events were asked additional, open-ended questions on why they had come to the event. Quote can be found below. From this it is clear that those who are generally less engaged with science come across Festival events more by chance, are brought by keen friends, or have a specific interest in the topic of an event. What was particularly promising was that while these audiences are at a Festival event they feel comfortable and welcomed, which no doubt increases the likelihood that they will attend future science events.

Answers to the question "How did you feel at this event?":

"It was welcoming. It was interactive, all the speakers seem relaxed and wanted to be there."

"Happy, relaxed, interested, friendly, stalls pitched quite well. People seemed quite engaged in the topic. Nice venue, could opt in and out. Not awkward."

"Felt welcome, demonstrators explained projects well. Was tailored to the public. Activities were interesting, fun to do."

Answers to the question "Why are you here today":

"To learn a little more on training for cycling."

"My friend told me about this event. I didn't know about it until my friend shared on WeChat. The stickers on the ground helps a lot and I searched the internet to know more about the event."

"We just happened to be wandering through."

"I wandered in by accident - I was meeting a few friends for dinner, I didn't know about this - it was a pleasant accident!"

"I came here completely blind. My friends told me to come."

"A friend (who is more interested in science than me) asked me to attend, very glad I did."

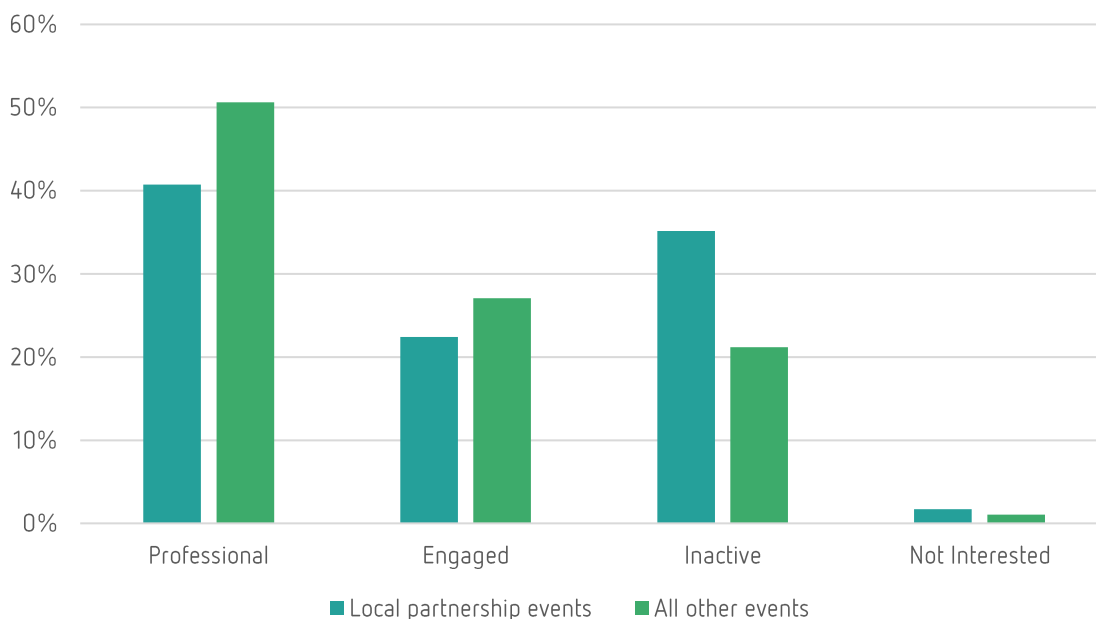


Figure 7. Bar graph comparing audiences' relationship with science who attended local partnership events and all other Festival events as per the [BSA's audience model](#).

If someone is 'Not interested' in science then they will probably not seek out a science festival. Therefore these audiences were predominantly targeted through the [Festival community grant scheme](#). This scheme also targets 'Inactive' audiences. The Festival provided grants of up to £500 to community groups and organisations in Coventry and Warwickshire. The scheme aimed to empower and support groups to run their own science activities as part of the Festival, enabling new local audiences to engage with science through active participation in events that were tailored for them, and raising awareness and interest in the wider Festival programme in underrepresented communities.

Community grants were open to groups and organisation that worked directly with audiences who are traditionally underrepresented and currently not engaged in science activity. For this scheme, groups that are underrepresented in science included:

- people who are from Black, Asian and Minority Ethnic backgrounds
- people with low socioeconomic status (SES), including people disadvantaged in terms of education and income
- young people facing adversity, including those not in education, employment or training (NEET)
- people with a disability, defined as a physical or mental impairment that has a substantial and long-term effect on someone's ability to do normal daily activities (Equalities Act 2010)
- people experiencing loneliness and social isolation.

Although reaching comparatively fewer audience members than the main Festival programme, events organised through this grant successfully reached 'Inactive' and 'Not interested' audiences. When compared to the main Festival programme, the effectiveness of the community grants reaching such audiences is clear (Figure 8). A very high number of these respondents had an increased interest in science after attending (96%) and 78% said they were more likely to look out for and attend science events in the future. Together, the figures suggest that these audiences' confidence in science had increased after attending community grant events.

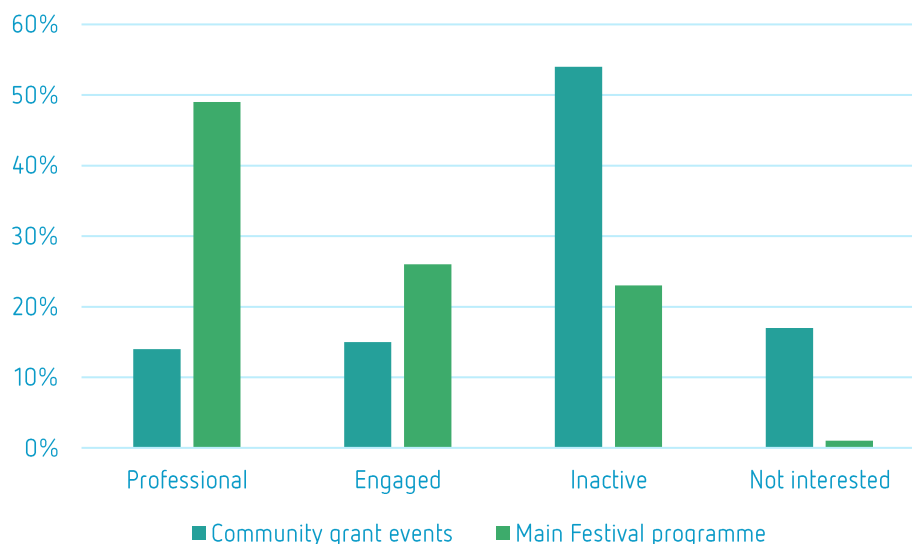


Figure 8. Bar graph comparing audiences' relationships with science at the community grant events and main Festival programme as per the [BSA's audience model](#).

4.6 Aim 6: Encourage active researcher/speakers ('Professionals') to value and participate in public engagement

4.6.1 *Objective 1 / 2: The BSA will provide diverse opportunities for active researchers (also referred to as speakers) to engage with the public / The BSA will programme events that reflect the diversity of current research and the people involved*

The Festival involved a total of 221 speakers and event facilitators in a range of events from lectures, panel discussions, workshops and drop-in activities which covered a host of different topics and research areas. The breadth of content can be found in the 2019 programme of events. Academics from and outside of the University of Warwick had the opportunity to participate in a variety of event formats on and off-campus, supported by the BSA.

Gender and ethnicity data of speakers was obtained through forms that they were required to complete prior to taking part in the Festival. Of the 221 speakers, 216 provided data on gender, with 54% identifying as Female, 45% as Male and 1% as Trans/Non-binary. Every effort is made to ensure fair gender representation is present at the Festival. A key aspect in ensuring this is through the fact that panel discussions (classed as events with 3+ people on stage) cannot be all-male. For the first time, the ethnic backgrounds of speakers and event organisers were also monitored. Just under half of speakers (109) provided information on their ethnicity with 65% identifying as White/White British, 2% as Black/Black British, 6% as Asian/Asian British, 0% as Mixed/multiple ethnic backgrounds, 6% preferred to self-identify and 21% preferred not to say. The large number of 'prefer not to say' responses are likely because the questionnaire was not anonymous for several reasons and speakers were made explicitly aware of this before answering the survey.

4.6.2 *Objective 3 / 4 / 5: Speakers will have a positive experience of the Festival / Speakers will feel more confident engaging with the public and will engage with the public more frequently as a result / Speakers will have increased awareness of public perspectives*

Speakers' experience of the Festival was monitored using a questionnaire sent out after the event. Out of the 66 speakers and event organisers who responded, 97% rated their overall Festival experience as 'Excellent' or 'Good' and 80% said they were more likely to participate in future public engagement activities.

Of those who said they were not 'Very confident' with engaging with the public before taking part in the Festival, 76% said their confidence has increased.

The majority of speakers (80%) also said they were more aware of the public's views on research. Anecdotal feedback from academics who took part in the Festival mirror this, which can be found below:

"There were many questions after my talk that gave me insights into the topics (or sub-topics) that are most interesting to the public and also where there are common misconceptions. This will certainly enable me to improve on any public engagement I do in the future."

"When you are researching a topic in a field with everybody who knows about it, you can assume that it is also well known by the public, but this proved not to be true."

4.7 Aim 7: Attract diverse attendees to the Festival

4.7.1 Objective 1: The BSF will reach audiences that represent the diversity of the local and national population

As mentioned in Section 4.2.2, 70% of all audience respondents at the Festival lived in Coventry and Warwickshire.

On the whole, ethnic backgrounds of respondents mirrored that of the local population of Coventry which has a larger population of people from Black, Asian and Minority ethnic backgrounds when compared to England and Wales (Table 1).

Table 1. Ethnic background of Festival audience respondents compared to 2011 census data of the UK, Coventry and Warwick. Population data has been obtained from the [2011 Census, Office of National Statistics](#).

Ethnic background	BSF 2019	England and Wales (2011)	Coventry (2011)	Warwick (2011)
White/White British	77%	86%	74%	89%
Black/Black British	2%	3%	6%	1%
Asian/Asian British	11%	8%	16%	7%
Mixed/multiple ethnic background	4%	2%	3%	2%
Prefer to self-identify	1%	1%	1%	1%
Prefer not to say	4%	-	-	-
Total	100%	100%	100%	100%

There was a relatively equal gender split between those who identified as Male (45%) and Female (52%), with the remainder either preferring to self-identify or not to say. Most respondents did not consider themselves to have a disability (90%), while 7% did and 3% preferred not to say.

The Festival was successful in reaching the 16-34 audience age bracket, who the Festival is targeted at. This group accounted for 45% of total respondents (Figure 9). The majority of respondents identified as being Heterosexual/Straight (81%) and a higher proportion of respondents identified as Bisexual (5%) or Gay or Lesbian (2%) than the UK average (Table 2).

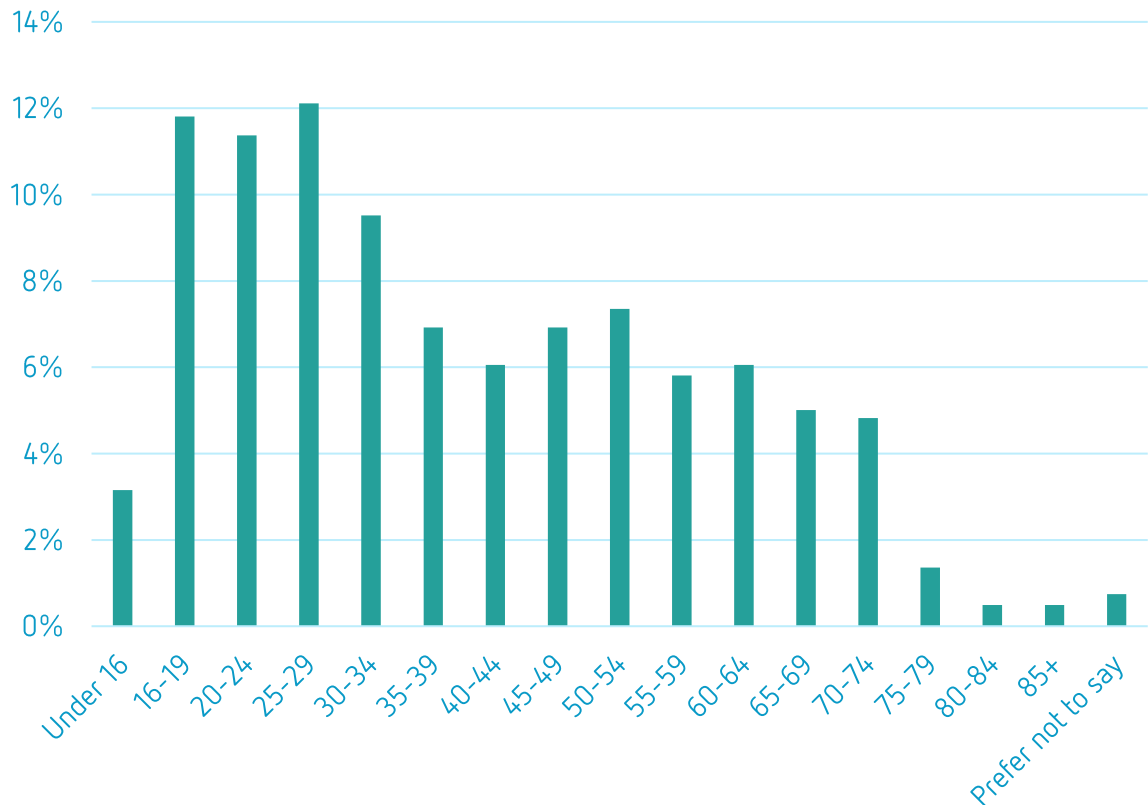


Figure 9. Bar chart showing Festival audience respondents' age brackets.

Table 2. Festival audience respondents' sexual identity compared to 2017 UK census data. Population data has been obtained from a [2017 UK survey, Office of National Statistics](#).

Sexual identity	BSF 2019	UK (2017)
Bisexual	5%	1%
Gay or Lesbian	2%	1%
Heterosexual/Straight	81%	93%
Prefer to self-identify	2%	1%
Prefer not to say	10%	4%
Total	100%	100%

This year, the Festival attracted a high proportion of respondents who identified as 'Professional', meaning they worked in a job relating to, or studied science, when compared to previous years (Figure 10). A number of factors could have contributed to this, including the greater focus on attracting sixth formers (who are more likely to study science) and the fact that 88% of the Festival programme took place on the University of Warwick campus.

Usually, the Festival takes place on and off campus in city centres to a more even degree. Therefore, the fact that in 2019 the Festival took place mainly on campus was likely the most significant factor in attracting a mostly 'Professional' audience. The campus was a ~15 minute drive from Coventry city centre, meaning unless an individual was already on campus, or wishing to go specifically for the Festival, they were unlikely to come across events or attend unless they were committed to doing so. As such, those from 'Inactive' backgrounds, who are interested in science but do not make particular efforts to engage, and who were best reached through evening and community events mostly off-campus (Figures 7 and 8), were less likely to engage with on campus events. For example, in 2017 44% of events took place at non-university venues in Brighton city centre. This is mirrored in respondents' relationship with science, with those with 'Engaged' and 'Inactive' relationships making up a more prominent proportion of attendees compared to 2019 (Figure 10).

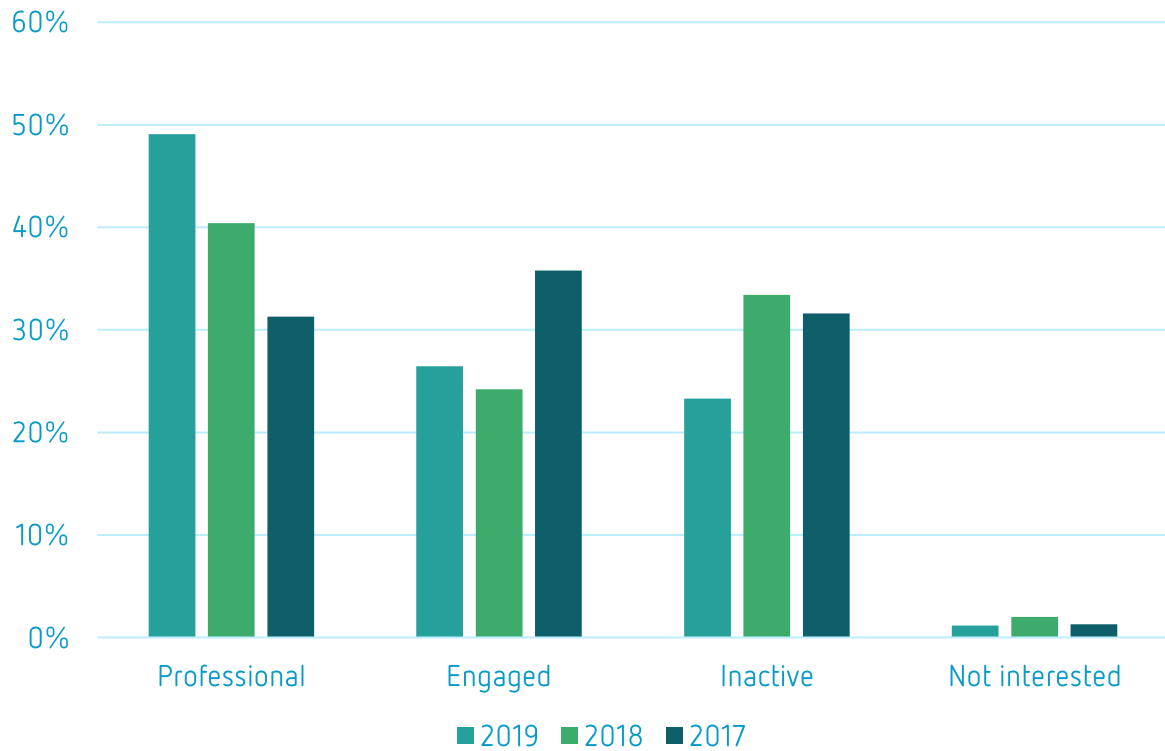


Figure 10. Bar graph comparing respondents' relationship with science at the 2017, 2018 and 2019 Festivals as per the [BSA's audience model](#).

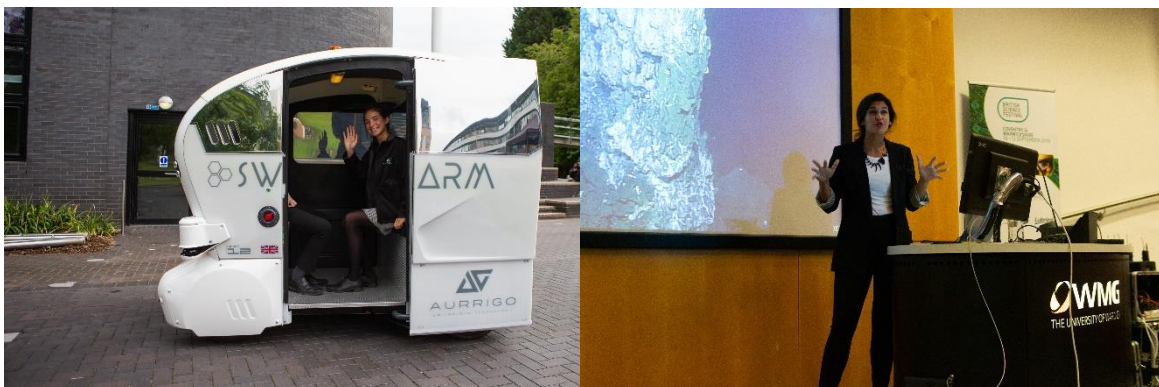
5. Conclusions

BSF 2019 delivered 128 public events and activities in Coventry and Warwickshire across 4 days. Events involved a range of different researchers, event organisers and the general public with a variety of interests and backgrounds to celebrate ‘science’ in its broadest sense.

Several factors contributed to the success of this year’s Festival, with all aims and objectives being achieved. There was a resounding positive response to Festival events by audiences from all backgrounds and levels of prior engagement with science. Speakers and event organisers, especially those from the University of Warwick, also enjoyed and benefited from taking part in events. In terms of demographics, the majority of audience members were between the target 16-34 age bracket and came from ethnic backgrounds which largely reflected that of the population Coventry.



This year a variety of new evaluation questions and techniques were successfully trialled. More reliable data on speaker and event organiser gender and ethnicity was obtained due to these questions being present on forms they were required to complete before taking part in events. Additional questions were also asked to audience members who identified as ‘Inactive’ at evening events which enabled a greater insight into their motivations for attending the Festival and how they felt while taking part. Furthermore, some of these audience members will also be contacted for a follow up interview 3 months after the Festival to understand how and whether their actions and attitudes towards science have changed following attendance.



While some of the key aims of the Festival are to reach ‘Engaged’ and ‘Inactive’ audiences, the 2019 Festival did not achieve this as well as in previous years. As mentioned in Section 4.7.1 this is likely due to many Festival events being held on the University of Warwick campus, which is almost 4

A partnership between:



Last updated: November 2019

miles from Coventry city centre. Evidence from this year's and previous years' British Science Festivals demonstrates that the best way to reach non-'Professional' audiences, particularly those who are 'Inactive', is through evening events at off-campus venues, usually in the city centre. This will be taken into account when planning the 2020 Festival.



Despite 'Inactive' or 'Not interested' audiences not making up a greater percentage of overall Festival event attendees, these audiences were successfully reached through the evening programme and community grant scheme. The success of the latter demonstrates the continued effectiveness of funding local community groups to programme science events for their specific audiences who typically would not identify as 'Professional' or 'Engaged'. The Festival is proud to be able to support people to do this and will continue to build the scheme in future years to reach such an audience base.

Looking ahead to next year's Festival, hosted by Anglia Ruskin University in Chelmsford, there are a number of recommendations based on the results of this year's evaluation, which can be found in the Section 5.1.

5.1 Recommendations for 2019

- Develop a diverse programme of events that draw on Chelmsford community's interests and expertise

As in previous years, the Festival should aim to form partnerships with local organisations and venues to develop content that is relevant and engaging for those who live in and around Chelmsford.

- Increase 'Inactive' audiences

A key aim of the Festival is to reach 'Inactive' audiences. Therefore, data from 2019 and previous year's Festivals must be considered when deciding on event venues, partnerships and timings. Evidently, evening events taking place off-campus tend to attract a larger proportion of 'Inactive' attendees. Anglia Ruskin University's Chelmsford campus is a short walk from the city centre, but whether this affects the types of audiences attending events on campus is as yet unknown. Regardless, in 2020 a higher portion of Festival events should take place in Chelmsford city centre outside of working hours in order to increase the number of 'Inactive' attendees to the Festival.

In the run up to BSF 2020, Essex council is encouraging and supporting local organisations and groups to celebrate science, technology, engineering, arts and mathematics as part of [Essex](#)

[2020](#). It will be interesting to see how this affects levels of engagement with the Festival, and the relationship with science audience members have.

- Develop the community grants scheme

'Not interested' audiences were best reached through the community grants scheme. In 2020, focus should be on growing and developing the reach of the community grants in Chelmsford. Local community groups could also be encouraged to apply for British Science Week 2020 funding (taking place from the 6-15 March 2020) in an effort to engage them with the BSA, and ultimately the Festival in September.

- Youth programming panel

A recommendation for BSF 2019 was to create a youth programming panel ('young creatives'), but for a number of reasons it was not possible. Looking towards 2020, the formation of a youth programming panel should be explored again as a way to engage 16-20 year olds, who may have an 'inactive' relationship with science, with the Festival. The panel will develop an event for the Festival, as well as inform other programming decisions, that will appeal to their age group.

- Diversity and inclusion

As in 2019, in line with the BSA's mission to champion diversity and inclusivity in science, every effort will be made to ensure that the speakers at the 2020 Festival represent diversity in its fullest capacity. The Festival provides a national platform and it can pave the way in showcasing and celebrating diversity within science. We will try to maintain the equal gender diversity we achieved in 2019.

- Evaluation form

If a focus for BSF 2020 is to attract more sixth formers and students to the Festival, it may be useful to split up the answer options to the question 'Do you work or study science?'. Currently the question is a simple yes/no tick box, but it is not possible to understand whether the respondent works in or studies science specifically. It is used to understand if attendees are 'Professionals' or not as per the [BSA's audience model](#).