



**Post-Event Summary Report**  
**Steps into STEM Project for BAME**  
**Women**  
**March 2021**

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## **Project Event Summary**

On Friday 12<sup>th</sup> of March 2020, Julia Wysocka, Community Engagement Officer and Alessia Di Meo, Learning and Sharing Officer, facilitated a 'STEPS into STEM' event for BAME women; funded by the British Science Association to celebrate British Science week. The event was open to the public and advertised on social media resulting in 13 participants attending the event.

### **The aims and objectives of the event**

The aims of the event were to inspire and encourage women from the BAME and ethnic minority groups to pursue an education and career in STEM. By raising the awareness of career opportunities. Enhance interest in Science, Technology and Mathematics. Awareness of key employability skills. Increased awareness of STEM-related careers.

### **The topic of the STEM event**

The topic included women's representation within the STEM sector with emphasis on importance of diversity and inclusion across the STEM sector. Issues, faced by BAME women, lack of career opportunities in their current job roles and improving career prospects for BAME women followed by examples of case studies of women from BAME and ethnic minorities who have successful careers in STEM.

### **Experienced guest speakers**

Two guest speakers were invited and on hand to open the event; Anna Fraszczyk a STEM ambassador who has previously worked at Newcastle University as a researcher for NewRail. Her role involved supporting the teaching and learning activities at NewRail. Anna is now a schoolteacher in Poland and continues to use her STEM skills in her current teaching role.

The second speaker was Karen Farr a STEM ambassador and a Technical Advisor at Northumbrian Water. Karen works in the Wastewater Performance team at Northumbrian Water to improve the quality of wastewater effluent and assess how well the sewage treatment process deals with chemicals in the environment for the national Chemical Investigation Programme. Karen Farr spoke about a variety of issues impacting women from BME groups in accessing STEM. For example, career opportunities for BME women.

### **Identifying and addressing the barriers faced by BAME women**

The session began by discussing barriers faced by BAME women. These barriers included a lack of confidence; lack of financial independence among the women; and social and cultural barriers (e.g., not having family support to work).

### Exploring STEM careers

During the session, STEM careers were discussed. Julia introduced participants to a world of opportunities and the skills needed to succeed in the 21st-century. Providing the opportunity to talk with potential employers, the important application questions that needed to be asked, meeting like-minded people which sparked inspiration. Examples, of careers discussed for people who have a science degree:

- Computer science
- Mechanical/ civil engineering
- Electronic and electrical engineering
- Information systems
- Chemistry
- Biology
- Physics

### Science Professionals

During the event data regarding STEM statistics for science professionals were viewed and this shows that it continues to show positive results for a growing gender diversity in these roles. Women now make up 46% of the total science professional workforce.

### Talking about STEM activities and opportunities

Participants were encouraged to take the leap and reminded that it is never too late to learn something new. Learn transferrable skills. STEM skills are for everyone. Busting myths and challenging perceptions. STEM skills are important and demand for them is growing fast. Emphasising that STEM organisations are keen to recruit people who represent **all of us**.

- Qualifications are in demand in the job market and offer good long term career prospects
- Organisations are very keen to recruit people to meet the shortage of skills they face
- Learning develops skills for solving problems, discovering new ideas, asking questions, finding answers, making things - food, materials and products

### Important Skills required in STEM

Useful skills and qualities were discussed such as:

- Being organised
- An eye for detail
- Having a common- sense approach
- The ability to record information accurately
- Good teamwork skills
- Practical and/or scientific skills
- Being questioning and interested
- Good problem-solving skills
- Good written and spoken communication skills

## **The value of STEM**

- Studying STEM subjects at college or university opens doors to a huge range of careers
- Jobs of the future will be in science, research, engineering and technology from now
- Rapid rise in jobs in science, research, engineering and technology fields
- Current figures show there will be a shortfall in the number of graduates and apprentices available to fill these roles.
- Getting more girls to consider these careers is essential to the success of UK industrial strategy

## **Gender gap needs to narrow**

- However, work needs to be done to encourage women to both study these subjects, and transition into the workforce.
- Specifically, computer science and engineering and technology fields show the largest gender imbalances, from current students, to graduates and the workforce figures.

## **Valuing a diverse workforce**

By offering both women in STEM and women not currently in STEM more opportunities to gain new skills, companies can create the workforce that they need for the future and increase the number of women in STEM who advance into leadership roles. Any barriers to individuals, or groups, entering and succeeding in the STEM workforce should be removed. Improving diversity in STEM also has the potential to benefit businesses, maximise individual opportunity, and meet a national economic need.

## **Advantages of holding the event**

The event was very successful and engaging because it boosted curiosity. Various presentations about women's representation within the STEM sector with emphasis on importance of diversity and inclusion across the STEM sector were delivered during the event. Provided participants with the opportunity to ask why it is important empower women to come up with imaginative solutions and invest in their education. Challenged the participants in looking at a career in a whole new way. Sharing opinions, thoughts and the

opportunity to develop recommendations for improving Diversity and Inclusion for ethnic minority women across the STEM Sector.

## **Encouragement**

As well as developing their interest in STEM. The aim of event was to give participants of the event positive feelings about embarking on a career in STEM and diffusing negative biases. Empowering women to take the initiative. Facilitating more positive feelings about STEM. Sharing ideas and different points of views and new ways to be productive. Learning from others and new ways to improve knowledge and skills. Gave participants the opportunity to speak to STEM experts about careers which helped to make a difference.

## **Empowering participants to break out of their comfort zones**

Emphasising strong and visible role models of women and women of colour in math and science fields. Giving women the confidence to pursue a career in STEM. Promoting a growth mindset that empowers women to embrace challenges. Encouraging women to embrace challenges. Promoting positive messages about their abilities

## **Becoming inspired to break the stereotype**

By meeting like-minded people and role models, the event helped develop of what it is to work in STEM. The opportunity to have an immersive experience with STEM subjects and realise that STEM subjects are exciting, accessible and achievable. The covered topics were relevant to our participants and their interests, which helped to spark discussion amongst participants and the guest speakers.

## **The driving force of innovation and discovery**

Alessia addressed the gender imbalance and therefore STEM, the event gave women an opportunity to meet STEM employers face to face. Helped to combat some of the barriers women face by providing a platform for discussion, sharing ideas and understanding different perspectives. Learning about how organisations are addressing inequalities faced by BAME women and how they are improving their work practices.

## **STEM Careers**

### **Civil Engineering**

- Civil engineers
- Design
- Construct
- Supervise
- Operate, and maintain large construction projects and systems

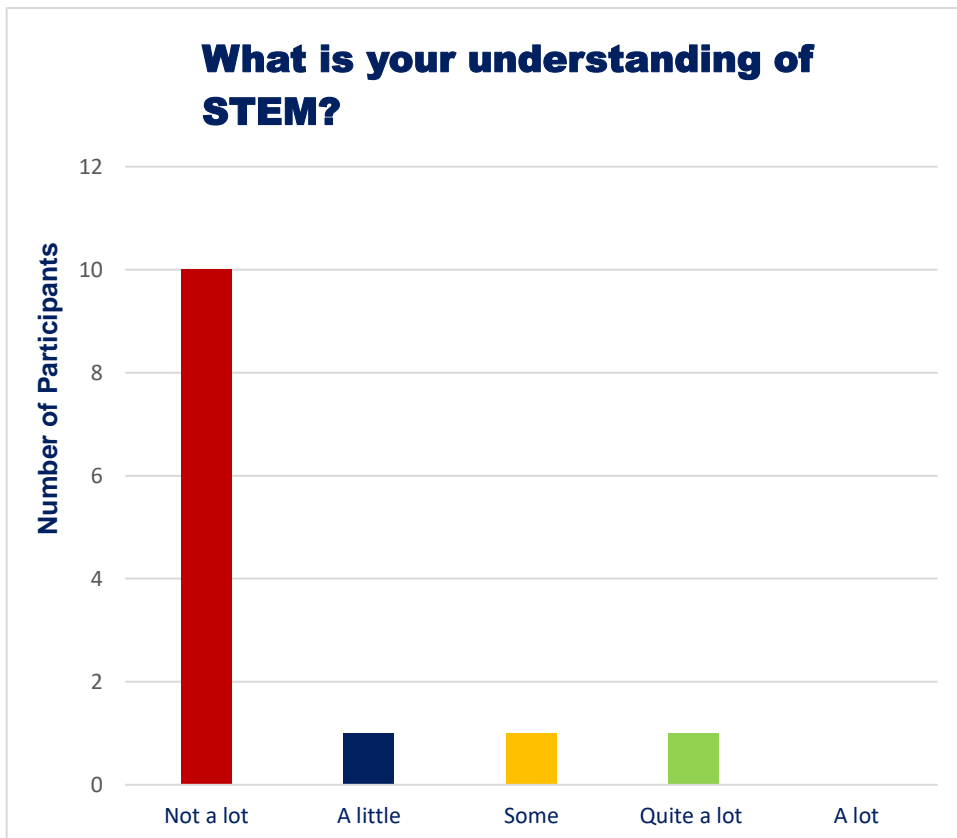
### **Mathematics**

- Conduct research
- Solve problems in various fields using mathematical methods

### **Astronomy**

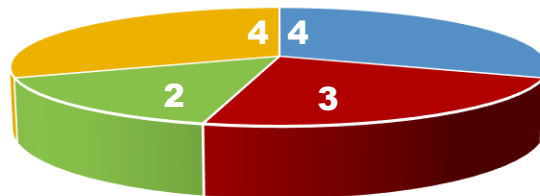
- Use ground-based equipment, software, and other tools to analyse and better understand celestial bodies and events
- Develop and test theories

## **Zoom Poll Survey**



From the poll survey carried out at the beginning of the session, the poll indicated that the participants did not know much about the STEM.

## What inspires you to want to pursue a career in STEM?



- Not feeling equally considered for progression in my current role
- More career prospects

The second poll question indicates that BAME women feel equally considered for progression their current role and would like to have more career prospects.

### Interactive quiz questions

10 questions were asked to find out what the participants knew about women from BAME and ethnic minorities, who had successful careers in STEM.

**Question 1** What is the Secret communication systems?

**Question 2** Who is Mae Carol Jemison?

**Question 3** What did Elena Notarianni discover?

**Question 4** What were Patricia Bath's' achievements?

**Question 5** Who was Maria Montessori?

**Question 6** Who is Karen Sparck Jones?

**Question 7** Who discovered radioactivity?

**Question 8** What did Ada Lovelace discover?

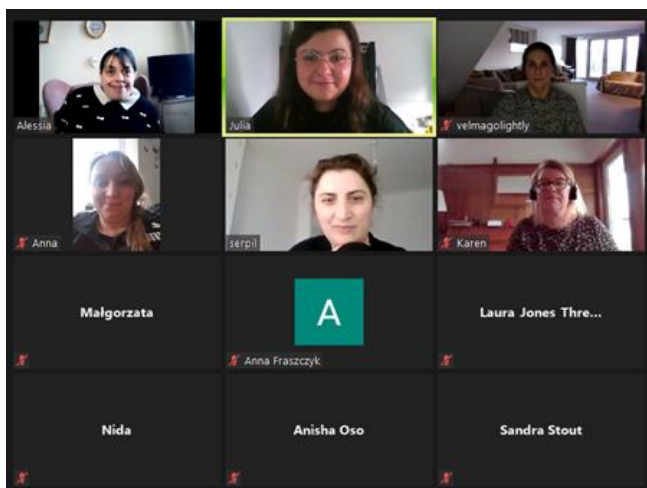
**Question 9** Which British Prime Minister had a degree in Science?

**Question 10** Who was Janaki Ammal?



## Having the opportunity to ask important questions

There was the opportunity to ask questions throughout and at the end of the session. This gave the opportunity to discuss about possible careers options, career paths and employers. The event was a perfect time for participants to find out by asking our guest speakers directly.



## Raffle

At the end of the event, we had a raffle, and our prize winner has been one of our Wise Steps participants who has won an amazon fire tablet, we would like to say big congratulations to Serpil!

