

Babcock aims to break down barriers to engineering for young people



Background

Babcock is an international defence company providing a range of products and service solutions to enhance customers' defence capabilities and critical assets. They deliver their services through four sectors: marine, nuclear, land and aviation.

STEM is everywhere in Babcock; from their naval architects and designers maintaining warships, through to the finance teams ensuring that their complex and critical projects are delivering value to their customers. By engaging with young people, their parents and teachers, Babcock is trying to spark an interest in studying STEM subjects and pursuing a rewarding career in the industry.

Debbie Joce is Babcock's **Group Head of Early Careers** and was instrumental in developing their STEM strategy. Together with her colleagues **Jemma Cunningham** – **HR Early Careers Advisor** and **Sam Roberts** – **Nuclear Safety Engineer**, she explains the importance of Babcock's participation in the STEM Ambassador programme.



Babcock staff Sam Roberts and Thea Docherty

The STEM Ambassador journey

Debbie: "Babcock has been working with the STEM Ambassador programme for more than six years. It is important for us to raise awareness of the importance of STEM – there is a shortage of engineers, and we need to break down the biases that people have about gender in our industry and what a career in STEM can offer. Our involvement with STEM Ambassadors is pivotal to this."

Sam: "I am a nuclear safety engineer and I work in the STEM team as the Primary Lead Coordinator, so I look after all things relating to primary schools within our engagement programme. I was a Scout leader for 10 years and I've always loved working with young people. When we deliver induction sessions to new cohorts of graduates, we always ask whether they can remember a STEM experience from their schooldays. They can all give me an example of when a company came in to talk to them, even some 20 years later! I remember when I was a child, I made it on to the local news recording the weather! Everyone has an experience like this – they endure. So, that's why I signed up to be a STEM Ambassador; I wanted to pass that on to others."

Jemma: "I am an HR Early Careers Advisor. When I joined Babcock in 2019 and started supporting the work experience programme, I wanted to be able to work with local schools and students, so I became a STEM Ambassador. I find it rewarding – that's the main reason why I do it – I love to support our local schools."

Debbie: “As an organisation we are very conscious that engineering isn’t as diverse or inclusive as it could be. **We need more engineers, so we wanted to start working with primary and secondary schools to showcase the opportunities we can offer to them.** We realised that we were pushing on an open door, especially at primary level – so many young people are excited by STEM. We still face challenges with how our industry is stereotyped, so we also try and work with teachers and parents – so we also try and work with teachers and parents because we know how important they are as influencers. **Our work with STEM Ambassadors feeds into our future talent pipeline.** We might start working with pupils when they start primary school, we will keep working with them right up to when they make their choices for GCSEs and A levels, and we will hopefully end up seeing them on our apprenticeship and graduate programmes.

We really believe that our STEM Ambassadors are a vital element of our Corporate Social Responsibility (CSR) programme. But we also feel that we have a broader collective responsibility with other STEM employers. We all need to work together to showcase the opportunities within STEM. We will never succeed in isolation.”

Jemma: “Our employees are entitled to use up to 2.5 days a year for STEM volunteering activities, but people can use more or less depending on what they get asked to do. Those people on our graduate scheme tend to do the most activities because being a STEM Ambassador is one of the objectives they have to achieve.”



Sam: “The Devonport Royal Dockyard is one of the biggest employers in the region, so we are keen to work with the local community and to tell them about what we do and the amazing opportunities on their doorstep.

We get involved in all sorts of activities, like supporting British Science and Engineering Week – our Devonport team made greenhouses with 450 pupils from two schools, for example. We have done a project with the Millfield Trust for pupils in receipt of free school meals that focused on forces and magnets. We ran a session to highlight and promote women in STEM for another school, so we did a Lego manufacturing game for them, and our female STEM Ambassadors talked about their own experiences and pathways into their jobs.

It’s testament to the sessions and programmes we deliver to see schools coming back, as well as new schools signing up. The range of schools we can reach is expanding, and towns and villages further and further away from our sites are getting involved. We also work with non-school organisations too, such as the Cadets, the local authority, and the Careers and Enterprise Company.”

Making an impact

Jemma: "The pandemic had a big impact on our programme. At the start, we didn't hear from any schools for around three months. It took us even longer than that to adapt to the virtual environment and to find a way to successfully deliver engaging STEM activities over a camera. Then, later in 2020, we started to support schools with virtual events. We delivered activities via Teams but we would have sent some STEM materials to the schools in advance so they could remain in their classroom and still have some hands-on experiences. We are continuing to offer both virtual and face-to-face activities now – we find it easier to engage young people in person, but online delivery enables us to reach more students.

The sessions that have the biggest impact are those that involve high engagement and lots of activity, such as our Lego manufacturing game. Students love it – they work in teams, it's hands-on, everyone has a role to play, it links well to careers education, and they can take a lot away from it."

Sam: "We were really delighted to have won the top award at the south regional STEM Learning Awards and we were invited to attend a ceremony at the Natural History Museum in London. Babcock also attended the National STEM Learning Awards in the House of Lords, and here we received the National Award for 'Inspirational STEM Employer' for our outreach work with young people.

We are so proud to win these awards as they celebrate the hard work and commitment put into STEM outreach by the Devonport STEM Team, but above all by the STEM Ambassadors – without whom we couldn't deliver the engaging and diverse activities to young people on the scale we do."

Debbie: "The STEM Ambassador programme offers so much for schools and young people. It's a hidden secret! It also gives us so many opportunities as employers to break down those stereotypes about our industry. I am always recommending it!"

Sam: "For primary-aged children, the messy stuff works the best. So do the non-conventional ideas. Students like weird and wonderful things! For our forces and magnets project, the students made parachutes out of different materials and in different sizes, and then attached them to eggs in egg cups and launched them from a height to find out what would happen. They had great fun and learned a lot in the process! Anything run by our Innovation Team is always a big hit too – things that children don't get to see on the day-to-day – remotely operated vehicles and robots are always popular!

I tell the STEM Ambassadors involved in the events that I run to make sure that the activities are fun for them in the first place. It is important that they enjoy these activities as much as the children do. We tailor our presentations to the age groups we are working with, and try to minimise the amount of text and to make it as accessible as possible. We make everything as interactive as possible with plenty of opportunities for questions."

How to get involved

If you have been inspired by how Babcock supports the learning and development of young people across the UK and you'd like to know more, please contact us at employer@stem.org.uk or visit stem.org.uk/stem-ambassadors/partner-info

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