

A Young STEM Leader & STEM Ambassador case study:

Inspiring women and girls in STEM at Peebles High School

Peebles High School in the Scottish Borders has been running the Young STEM Leader Programme (YSLP) for the last two years. This year, an inspiring group of Young STEM Leaders set out to tackle gender stereotypes in STEM in their school. This was achieved in a number of ways, including recruiting a variety of women STEM Ambassadors from across the UK to showcase STEM careers to fellow pupils. We interviewed the Tutor Assessors, Young STEM Leaders and STEM Ambassadors that took part to hear about the impact of the activities.

Iona Minto: PT STEM and Biology at Peebles High School

Iona is a Biology Teacher at Peebles High School (PHS). As Principal Teacher of STEM she aims to increase awareness, participation and aspiration of PHS pupils in STEM as well as increasing the opportunities to collaborate on STEM activities with local partners. She is a Young STEM Leader Tutor Assessor and this year took on the role of Associate Regional Trainer and Verifier for the programme.



The STEM Girls group now has over 50 members. Their work has been recognised with a '20Under20 Inspire Award' from the local authority.

Tell us about your Young STEM Leaders

We have 12 Young STEM Leaders, all in S6 studying a variety of STEM Advanced Highers who have achieved or are working towards the YSL6 award at SCQF Level 6. The four STEM Girls form one group within this cohort.

What made you start running the Young STEM Leader Programme (YSLP)?

I was part of the YSLP working group in the summer of 2019 and ran a YSL6 pilot in 2019-2020. I was delighted to see this feature in the Scottish Government STEM Strategy and have been impressed with all stages of the development of this programme. We ran YSL6 in the pilot last year and I was already planning to continue with the programme this year.

How are you delivering the award now?

As we don't yet have YSLP as a timetabled class we use time in the school day where my non-contact aligns with students non-contact periods. The STEM Girls meet with me every Monday – which is a great way to start the week. Restrictions in school and lockdown have posed problems, but the determination of the STEM Girls Team has meant they have still achieved a lot.

How did the STEM Girls group start?

The STEM Girls group was initiated by the girls. Ruby, Emily and Tilly achieved their YSL6 award last year via the Engineering Development Trust's Engineering Education Scheme. This was a great experience working with a local engineering company and opened their eyes to the potential opportunities in STEM. >>

They, along with Amber, approached me to help them establish the STEM Girls group. Their enthusiasm for STEM is infective and they are excellent role models.

What impact have the STEM Girls made to the wider school community?

The group have drawn on their own experiences and have become advocates for gender equality. They appreciate that other girls may not be as resilient as them and are passionate about improving the experience of others in the school. They recognise that gender imbalance is a local, national and international challenge in STEM and want to take positive steps to improve participation rates of women in STEM subjects and careers. For the first time at Peebles High School there is student led action to tackle such an issue.

How has the support of STEM Ambassadors been helpful to the process?

The girls have hosted STEM Ambassador Career Pathways events. They have had guest STEM Ambassadors join a Teams meeting and give a brief account of their current role and how they got there, before participating in a Q&A with the audience. Guests have included women working in Biomedical Engineering, Nuclear Energy, Data Science and Chemistry. Being able to access this amazing network has demonstrated the huge variety of roles available in STEM. The Q&A sessions allowed the girls to find out more about course choices in school, university life, working abroad and employment opportunities. The girls are keen to take up the opportunity to register themselves as STEM Ambassadors. This has shown them their value in this network and will allow them to continue their inspirational work.



Four of the STEM Girls from PHS.

Amber, Emily, Ruby and Tilly: STEM Girls and Young STEM Leaders at Peebles High School.

What is STEM Girls?

STEM Girls is a new initiative which we have set up this year at Peebles High School to try to break down gender stereotypes in STEM subjects and to create a welcoming community in which girls can develop their interest in STEM and share their ideas with others.

Tell us about the activities, events or interactions that you have run?

Our monthly 'STEM Ambassador Nights' let our girls meet inspirational women from across STEM, hear a short presentation about their career and ask lots of questions. We love these nights as they showcase the fantastic breadth of careers and opportunities in STEM and highlight that girls really can do anything! We have an Instagram account where we post

about inspirational STEM Women and we run Lockdown Quiz Nights and poster competitions. We also organise Subject Support Nights and Course Choice Nights to help our girls with their STEM studies and provide support with choosing subjects for the next year.

How has being a Young STEM Leader helped you to improve your leadership skills?

We originally wanted to start up STEM Girls out of enjoyment and interest. However, along the way while working as a team to plan and run events, we have developed our communication skills by talking to and trying to build a community with the rest of the group. Our resilience has also been tested as we have tried to get everything going in the middle of a pandemic. Running STEM Girls has allowed us to try things out in a low-pressure environment which has really boosted our confidence in leadership roles. >>

What has been most inspiring about working with STEM Ambassadors?

They have all made me a lot more enthusiastic about our project and work. Attending the monthly ambassador evenings has allowed me to hear about and learn from so many inspiring women in STEM.

Esther Richter: Marie Curie Early Stage Researcher and STEM Ambassador

Esther is an Early Stage Researcher at the University of Glasgow working on droplet and acoustomicrofluidic devices for directed evolution applications. Esther has a background in biomedical engineering and design engineering and materials mechanics.

Why did you become a STEM Ambassador?

I was lucky to have family members in STEM jobs and especially my father always encouraged me to follow my interest. He also took me to STEM study & job fairs as well as to 'Girls Days' at Companies in our home region. I want to inspire and encourage students like my father did for me. STEM is very diverse, and I want to show students what my journey looked like.

Why do you think the STEM Ambassador Programme is important?

There are many opportunities in science out there and students often do not hear about them in school or they are difficult to find online. It is important to show students the diversity of STEM and show them what science can be, besides the theory taught in a classroom.

What did you think of the Peebles High School STEM Girls Group 'Career Pathways' event?

I enjoyed the interaction with the students as well as the other STEM Ambassadors. The students had interesting questions and us Ambassadors were able to answer them together and add more points to each other's answers.

Ally King: Nucleargraduate and STEM Ambassador

Ally is currently on a graduate scheme called nucleargraduates, involving short (8-month) placements around the nuclear industry. She has a degree in Chemistry from the University of Oxford. She is currently on placement in Rolls-Royce Submarines Ltd as a Chemistry Technologist focusing on analysis of radiation data.

Why did you become a STEM Ambassador?

The nucleargraduates scheme encourages us to use our experience to raise awareness about the industry and develop our professional skills. Being a STEM Ambassador allows me to inspire young people interested in STEM like myself and tell people about the nuclear industry.

Aside from the Peebles High School STEM Girls Group 'Career Pathways' event, what other STEM Ambassador activities have you been involved with?

I have produced videos and teaching tools relating to nuclear energy to help schools and homeschooling parents teach young people about the benefits and challenges my industry is facing. I hope to run in-person events at schools when it is allowed.

What did you think of the Peebles High School STEM Girls Group 'Career Pathways' event?

I really enjoyed the event! The girls were excellent hosts and asked intelligent and interesting questions. I was able to give advice I have learnt from university and my career and discuss the opportunities available to the girls. I was able to dispel myths about poor diversity at Oxford and in STEM Careers and give an honest take on my experience as a young female professional in STEM. I raised awareness about the nucleargraduates scheme. The girls' questions also encouraged a fascinating discussion about the opportunities that nuclear energy presents in the future. <<

Find out more...

STEM Leader programme

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STEM Ambassadors in Scotland

To learn more about becoming a STEM Ambassador visit www.stemambassadors.scot, email us stemambassadors@sserc.scot or check out our Twitter [@ScotSTEMAmb](https://twitter.com/ScotSTEMAmb).