

A Young STEM Leader case study:

Building STEM capital in Turnbull High School



Turnbull High School in Bishopbriggs, East Dunbartonshire has been delivering the Young STEM Leader Programme (YSLP) for the last two years. Delivering YSLP in a secondary setting is a great way to add value to existing STEM engagement activities, helping to build and maintain a STEM learning community led by positive role models.



YSLs at Turnbull High School delivering gameshow style STEM activities to younger pupils.

Jacqueline O’Kane is a maths teacher in Turnbull High School, Bishopbriggs. As Principal Teacher of STEM she works with STEM departments and S6 pupils to create a vibrant STEM culture in their community. She leads the School STEM Action Group, which consists of members of staff from across the STEM departments. They meet at least once per term for a planning and update meeting to take forward the STEM agenda. Jacqueline is a Tutor Assessor for the Young STEM Leader Programme and has been delivering the award at Turnbull High School since 2019.

Tell us about your Young STEM Leaders

This year eight pupils have decided to participate in the YSL6 award. Each year we appoint two STEM captains and two Numeracy Captains, who lead a group of S6 pupils to support all STEM departments. These captains along with the other S6 pupils have a team meeting on a fortnightly basis to catch up and plan future events

and work. The pupils are great fun to work with and are enthusiastic about STEM and working with the younger year groups.

What made you start running YSLP?

Like most schools, we have had S6 leading and delivering aspects of the curriculum, supporting staff in clubs and activities within STEM subjects for many years. This programme has given us the opportunity to formally certificate pupils for the tremendous work that they are doing to enthuse, engage and stimulate the younger pupils in STEM subjects and careers.

How long did it take?

It did not take long to set up as we have an established programme of S6 working across the school. The support from SSERC has allowed us to present the award with ease.

Was it worth it?

It has definitely been worth it. Last year we presented pupils at YSL6 and we are hoping to repeat this process this year. As pupils are required to participate, lead or create three

STEM experiences we have a vibrant and growing STEM community.

What did the pupils think?

Pupils are enjoying the experience, working and supporting pupils and departments. It gives them a platform to display their leadership and creativity. The feedback from the younger pupils has been fantastic.

How are you running the award in its second year?

This year we are building on the success and ideas from our previous YSLs. I meet with the STEM Captains every two weeks and the Numeracy Captains meet with a maths teacher on a regular basis. The captains meet with the other YSLs on a weekly basis and report to me on their progress.

In previous years we have run events and workshops supported by STEM Ambassadors but due to COVID we have had to ‘think outside the box’ to ensure that we are able to make an impact with the younger pupils. This has resulted in more virtual engagements. >>

Examples of some activities, events and interactions developed by the YSLs are forensic workshops, monthly Numeracy Challenges and adapted gameshows such as The Chase, Kahoot quizzes to support STEM learning and Careers Information PowerPoints. For support in the Senior Phase, YSLs have produced presentations, tutorial work for subjects and Kahoot quizzes too.

S6 pupils Cara and Emma are both Young STEM Leaders at Turnbull High School.



What’s the best thing about being a Young STEM Leader?

Cara and Emma: As Young STEM Leaders we have been actively involved in engaging with our peers within science. It has provided us opportunities to engage with staff and younger pupils too. It has been great fun so far and we really enjoy having responsibilities to deliver exciting and worthwhile experiences for pupils.

Tell us about the activities, events and interactions you are delivering

Emma: I have contributed to the presentation of Higher Human Biology by running supported study sessions to aid pupils with their knowledge and motivate them to succeed. I also organised experiment demonstrations for S1 pupils to ignite their interest in science and encourage them to continue their academic career within STEM.

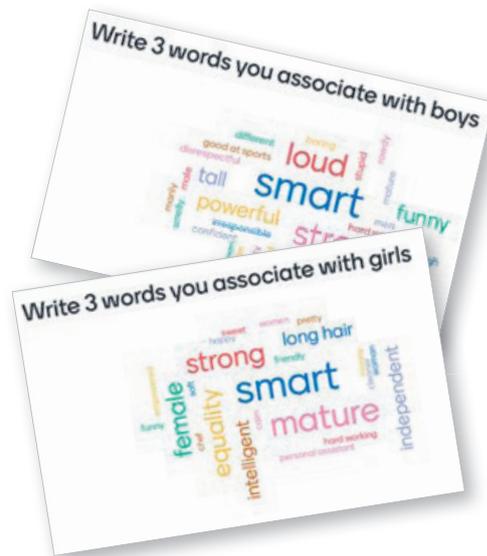
I have created Kahoots and Numeracy work for Halloween and Bonfire Night for S1 which the maths department has been using in first and second year.

Cara: I have organised supported study in Physics to support pupils in their learning. I helped create a STEM Careers PowerPoint for the BGE and I am currently promoting a STEM competition from Shell. I have created Kahoots for the Science department. One of my other roles is to engage regularly with the other YSLs to give Ms O’Kane an update on our activities.

How has Young STEM Leader helped you to improve your skills in leadership, communication and teamwork?

Cara: I have immensely improved my confidence as a leader. The experience has pushed me outside my comfort zone and encouraged me to take initiative and organise events for my school. I think it is important to provide a positive platform for STEM within school and raise awareness of the lack of female representation in the sector. As such, along with other Young STEM Leaders, I have been involved in ‘Stay in STEM’ events and supported learning programmes to help and encourage pupils to pursue a career in STEM. The Log and written work we are completing helps me to identify my strengths and areas for improvement and this was very valuable as I have since been able to improve myself.

Emma: I worked closely with other Young STEM Leaders to organise and carry out these tasks and



The YSLs at Turnbull High School received training from Education Scotland about gender stereotypes and unconscious bias, helping them to address these issues through delivering STEM activities, events and interactions.

this required me to work to strict timescales and be effective in a team environment. This opportunity has allowed me to improve my interpersonal skills and develop my leadership qualities, skills all applicable to the world of work and university.

What would be your advice to people thinking about becoming a Young STEM Leader?

Cara and Emma: As a group of S6 we are enjoying having a lead role in the school. It is definitely worth doing, and it is not too time consuming. Overall, we are very grateful to take part in this experience and the skills we have gained will be applicable to our daily lives and further education. It is also good for our UCAS Personal Statements.

It is fun....do it!



Find out more...

To learn more about the Young STEM Leader programme and start delivering it in your school, visit www.youngstemleader.scot, email us youngstemleader@sserc.scot or check out our [@YoungSTEMLeader](https://twitter.com/YoungSTEMLeader).