

Catherine Milne - P4/5 teacher at Avoch primary school

Cath is a Young STEM Leader Tutor Assessor. She and her YSLs took part in the pilot of YSLP with 23 young people gaining a YSL2 Award. She even supported an S6 Young STEM Leader from Fortrose Academy to gain a YSL6 Award.

Cath is now starting year two of her delivery of the programme and has shared her YSLP experiences with the Project Team at SSERC.

Tell us about your Young STEM Leaders

My P4/5 class (8-9 year olds) at Avoch Primary School in the Highlands of Scotland have recently completed their YSL2 Award at Curriculum for Excellence (CfE) Second Level.

What is the Young STEM Leader Programme (YSLP)?

This Scottish Government-funded programme is led by SSERC. It was borne from the 2017 Strategy for STEM Education and Training which identifies the need for STEM education to equip young people with the skills necessary for future industry and to close equity gaps in participation and attainment in STEM.

In the session 2019-2020 the YSLP was piloted across Scotland with over 70 centres taking part – where a centre is typically a primary or secondary school, community, or youth group.



The pilot introduced and tested YSL2 and YSL6 (SCQF Level 6) whilst the remaining four levels were under development.

Young people have the chance to inspire, lead and mentor their peers through the creation and delivery of STEM activities, events and interactions within education establishments or local community groups. The aim is to develop young role models with an interest in STEM.



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How did your pupils achieve the Young STEM Leader award?

At all levels, there are 4 core elements to the programme. Each of these (Discover, Create, Inspire, Lead) comes with a digital badge and then a certificate on successful completion of the programme.

1) Discover

This section is about young people discovering the importance and meaning of STEM.

My class talked to school visitors and relatives with careers involving STEM, including in less traditional settings, such as an electrician, a mechanic, a beautician and even a shop keeper who talked about working with money!

Part of the Discover element also concerns negative STEM stereotypes and how to positively challenge them – with my class I used the ideas from Improving Gender Balance Scotland produced by Education Scotland [1].



2) Inspire

For YSLs to lead others in STEM activities it is important that they understand the skills required to inspire and how to make their mentoring experiences inspirational. For this part of the programme, children are required to research an inspirational person, group or event. For homework, my class researched a person/team (it didn't have to be people in STEM) who they found inspiring. We gathered information on what it was about these people that made them inspirational and used this knowledge to think about how they could be the same!



3) Create

In the create section, the children have to plan a STEM activity, event or interaction. They explore how to select a purposeful activity, how to plan, bearing safety in mind, how to organise resources and how to structure effective learning. Big, powerful asks of a class of 8-9 year olds. But with guidance and support we know that our children achieve amazing results. My class decided that they would like to mentor the P1 class. They were given time to research appropriate fun activities. They decided that any activity should be simple, not take too long, be fun, and have a clear STEM learning intention (and be cheap – my addition to the mix).



Once they had voted on the favourite 3 activities the class completed trial runs with one group pretending to be P1s. My class had to practise what they would say, how they would structure activities into small steps, how they would ensure safety of the younger children and how they would keep them on task - they felt very grown up and enjoyed thinking about how old and wise they had become. A useful part of our planning was spending a couple of afternoons

playing with the P1s learning what they could do, what they understood and how to get the best from them. We discovered that a 45-minute session (once a week) was a good length to hold the attention of the little ones.

4) Lead

Before we began our practical sessions, we explored the skills, qualities and behaviours of a good leader. My class were able to talk about leaders they knew such as the Headteacher, Brownie Leader and football coach.



Then they were ready to be unleashed onto the P1s... The 3 chosen activities were:

- building O-wing gliders;
- growing gel crystals;
- an outdoor session looking at minibeasts.

Behind the scenes, the P1 teacher and I divided the 2 classes into small groups, matching children that we thought would be good for each other. The children stayed in the same groups for each activity so that they got to know each other well. The joint sessions went smoothly because of all the background preparation. My class were very organised, acted very responsibly and enjoyed leading the younger class through the sessions. The P1s thought it a real treat to work with the bigger children. It was lovely to see some of the shyer, quieter children coming out of their shell and confidently guiding the younger

children through each session. It was a great success for both classes.

How long did it take?

Every participant must complete a Log as they go through the programme. From start to finish, the whole process probably took my class about 30 hours over the year including class discussion, research, trial runs and working with the younger class.

Was it worth it?

Yes, I will definitely be doing it again, the Log and support notes are all easy to follow and self-explanatory. There are brilliant resources on the YSLP website that are being added to all the time. The programme is extremely flexible and does not have to be done in a classroom setting as I did. As always, the SSERC team were extremely helpful and supportive.

What did the pupils think?

The children of both classes got a great deal out of it. It was lovely to see the confidence and enthusiasm with which my class mentored the P1s and the bond that developed between the 2 classes.

Much of the programme is geared to providing young people with the skills needed not only for STEM careers but the leadership, inspiration, creativity, and flexibility will ensure that Scotland remains a great place to work in the future. <<

Reference

- [1] <https://education.gov.scot/improvement/documents/sci38-primary-action-guide.pdf>

