

Life as a Scottish Polar Ambassador

When SSERC invited me, Heather Reid, to get involved with the STEM Learning Centre's Polar Explorer Programme I wasn't sure quite what to expect. But having forecast my fair share of wintry weather over the years, and even a few 'polar lows' - I was sufficiently intrigued to attend a training day and find out more!



Figure 1 - Pupils at Corpus Christi Primary school.

I, along with my fellow Scottish Polar Ambassadors, learned all about this creative primary STEM programme inspired by the UK's new polar research ship, the Sir David Attenborough - not forgetting it's state-of-the-art robotic subsea vehicle, Boaty McBoatface!

The Polar Explorer Programme includes a fantastic collection of resources and teaching notes which are freely available on the STEM Learning website to anyone who wishes to use them for STEM

activities using the context of the design, construction, and subsequent role of the research vessel and its long range submersible.

I am now thoroughly enjoying life as a Polar Ambassador working with Corpus Christi (Figure 1 and 2) and St. Pauls Primary schools in Glasgow, and Todholm Primary in my home town of Paisley. We have investigated floating and sinking at second level using the programme's 'Design a Boat' activity. This was followed up by an Ice Breaker experiment which allowed pupils

to research forces and different hull shapes. Of course ship-building also lends itself to an excellent historical context in Scotland, as well as the potential for reading and discussing the adventures of Ernest Shackleton and Scott of the Antarctic. ▶



Figure 2 - Polar Ambassador Heather Reid at Corpus Christi Primary school.

My schools are all developing their Polar Explorer Programmes in slightly different ways and that's one of the beauties of this very flexible resource. It offers a wide range of easy to follow experiments and activities, complete with teaching notes and ideas for extension work. So whether you want to focus on engineering and forces, polar region wildlife, polar exploration or climate change and the oceans - there is something for everyone. And because this is such an appealing context for learning, it's the pupils who are leading the way with excellent project work and creative ideas.

We're currently working on a series of ocean acidification workshops along with a great little experiment entitled, 'How do you like your Oceans - Still or Sparkling'. It's

wonderful to see pupils understand the consequences of increased CO₂ levels on our oceans, and then designing their own experiments to investigate the impact of increased acidity on shell-fish. Some P7 pupils are even leading science workshops in P1 classes (see Figure 3).

As well as creating memorable primary science experiences, the Programme also aims to increase young people's knowledge of the many and varied career opportunities available to those who study STEM subjects. We definitely have some budding polar scientists of the future in Glasgow and Paisley who can't wait to meet a few polar bears, penguins or arctic foxes while conducting cutting edge science in the world's most extreme climate. I wish them well. ◀



Figure 3 - P7 leading P1 workshop.

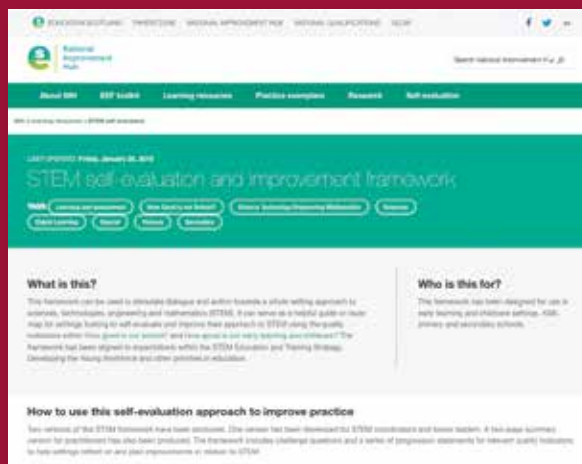
STEM self-evaluation and improvement framework

Education Scotland's new STEM self-evaluation and improvement framework is available to download from the National Improvement Hub [1].

This STEM framework can serve as a helpful guide or route map for early learning and childcare establishments, primary, additional support needs and secondary schools looking to evaluate and improve their approach to STEM using the quality indicators within *How good is our school?* and *How good is our early learning and childcare?* The framework has been developed in partnership with 50 early-learning and childcare settings and schools that participated in Education Scotland's National STEM Project.

The framework is also aligned with national priorities and policies including the STEM Education and Training Strategy for Scotland, Developing the Young Workforce and the Scottish Attainment Challenge. Two versions of this

STEM framework are available: one for STEM coordinators and senior leaders and a two-page summary version for practitioners. ◀



Reference

- [1] The framework can be accessed at <https://education.gov.scot/improvement/learning-resources/STEM-self-evaluation>.