



Polar Explorer Programme: key findings

The Polar Explorer Programme (PEP) was developed to build on public interest in the Polar Research Vessel *RRS Sir David Attenborough* and its famous submarine *Boaty McBoatface*. Over three years, PEP worked with 500 primary schools to increase achievement, attainment and engagement with STEM, especially for under-represented groups.

STEM Learning commissioned Qa Research to undertake an independent evaluation of PEP, which found:

- **Improved teaching:** all participating teachers reported their confidence in teaching of STEM subjects had increased, with many commenting on the wider impacts on their colleagues and schools. *"PEP was the start of the school improvement, it was really pivotal; that excitement, a new way of learning... it was exciting and relevant"*
- **Increased attainment and progression in STEM** was reported by 99% of teachers, along with increased pupil confidence in science. Exposure to practical science and exploration helped to develop resilience in pupils – an area of increasing focus for many schools: *"They got that sense that it was OK to fail and adapt... it gave them a great sense of achievement."*
- **Increased pupil enjoyment of and engagement in STEM lessons** was reported by all teachers, many of whom commented on the value of the context provided by PEP. They also noted the positive impact of engagement with Polar Ambassadors (volunteers with relevant career backgrounds) on pupils, parents and families.
- **Increased knowledge of and aspirations towards STEM careers:** by the end of the programme, 62% of students exhibited good knowledge of STEM careers - compared to just 48% at the start - and 43% of students aspired to STEM careers, a rise of 8%.
- **Challenging stereotypes:** following PEP, 11% more students agreed that "anyone can work in STEM" and the number who thought STEM jobs were "mostly for boys" halved to 8%. PEP *"has given them a sense of aspiration; they don't draw scientists now in white coats with big hair... like Albert Einstein ...some of them have said to me, 'But, Miss, what do I draw? Because scientists can be anybody!'"*
- **Addressing disadvantage:** the breaking down of stereotypes around science careers was of particular significance in areas of high deprivation. Teachers commented on how PEP helped to broaden the horizons of students from disadvantaged or rural communities, increasing their confidence and self-belief in science.

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