



Northumbria University

Shortlisted for Family Learning in the
Early Years

NUSTEM is an outreach and research group at Northumbria University. Their vision is for a vibrant and sustainable STEM sector that meets the needs of learners and employers and reflects the diversity of wider society. They want STEM to be accessible to everyone, for study and for pleasure, from early years, through school, to employment and beyond.

The group works to provide activities to engage children, teachers and families, including:

- Resources to support educators to embed career-related learning into their curriculum teaching.
- Collaboration with organisations to develop effective STEM engagement policies and programmes.
- Research to strengthen the evidence base for STEM education and employment.
- Support and inclusivity for under-served areas in their region.

Family learning provision

The project 'Play, Be, C' is designed to provide high quality STEM early years interventions, recognising that teachers and adults in education and community work are often highly influential and capable, but do not have a STEM background. Under-served demographics are carefully considered to reduce bias in the foundations being laid for later industry development and recruitment. The goal is to provide active learning that is achievable for the child with the support of their family, promoting clear and understandable scientific principles alongside five key attributes across the unit: collaboration, resilience, observation, curiosity, and creativity.

'Play, Be, C' uses storytime and linked activities for families to explore STEM learning together. Families can try out activities tailored to the child's development within the familiar early years foundation stage (EYFS) setting. Parents learn about STEM curriculum content and teachers are able to engage with families in new and interesting ways. The units are also available online with full and detailed delivery guidance with clear links to the Early Learning Goals.

Judges from Campaign for Learning and CACHE Alumni loved seeing STEM learning explored within the early years setting. They also noted the design methodology showed a sound demonstration of a good family learning ethos and learning theory.



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Impact and next steps

NUSTEM have found that care and attention to detail within the planning stages has led to good outcomes. Important meta-learning qualities have been identified where children concentrate and keep on trying if they encounter difficulties (resilience in learning), and ultimately enjoy their achievement of completing the activity. NUSTEM feel it has provided schools with a way to reconnect with families and parents after the Covid-19 pandemic. The programme supports parents to work together with children in activities that specifically require adult support.

Feedback from parents and teachers has been very positive, with one teacher from North Tyneside saying: "I was over the moon with how the teaching and learning went with the NUSTEM scheme and I have had great feedback from parents too, as the children have taken the learning home and been talking about floating and sinking at bath time etc. The depth of learning, focus, investigation and language from the children was amazing."

NUSTEM plan to develop additional units that link more widely to other areas of learning. Increased promotion is planned, informed by market research that will be carried out by the Business School at Northumbria University.