

Marginalised scientists

The articles on 'marginalised scientists' in this issue offer a superb snapshot of some inspiring work by colleagues, supporting diversity and inclusivity in primary science.

The ground-breaking work of Lara Lalemi and the Creative Tuition Collective is highlighted at the very beginning of this issue. This work in Bristol is insightful and seeks to give a flavour of how bespoke focused tuition in STEM can be experienced by young disenfranchised and all-too-often marginalised learners. This work is truly inspiring and Lara and her team also include a workable exemplar (plus a convenient link for additional support materials) for those readers wishing to replicate or trial a similar approach in their classrooms. Complementing this context is an astute reflection by Michele Grimshaw, who is an area mentor for PSTT. Michele speaks about her own professional journey of realisation of the benefits in making wider cultural references more visible in STEM narratives and exemplification. Both articles give real food for thought about ways forward in thinking about diversity and achieving a more inclusive primary science for everyone.

What better article to follow than the work of David Allen and Alex Sinclair and their popular book *Superhero Scientists*. This excellent work continues to inform and delight. An insight into its development, together with a sample chapter, is included for members. This is complemented beautifully by Louise Couceiro's insight into how biographies of women in science can inspire and engage. Her work also demonstrates the need for primary science not only to inspire and awaken young learners, but also to ensure that teachers consider what message text resources mirror to young learners. Both articles remind us of the important impact resources can have, especially in promoting inclusion, diversity and equality.

We also have an article from Jane Essex, focusing on special educational needs and disabilities and additional support needs. The winner of the Royal Society of Chemistry's Inclusion and Diversity Award in 2019, Jane offers professional comment from her 35 years of research

and specialist teaching of primary science in the field. Crucially, she shares her personal insight into the benefits for all children of fairer and more equal access to science. Envisioning a better science future with and for all children is also a key feature in Fay Lewis's article on the advantage of discussing not so much 'what' children might want to do when they grow up, but rather to imagine 'who' they want to be. This too helps focus the practitioner mind on how primary science could be the catalyst to genuine engagement, equality and inclusivity.

We then move into the international arena a little more and take a closer look at collaborative experience and pedagogical cross-cultural sharing with Jules Pottle. This is

an intriguing article on how international collaboration on classroom practice can influence and inspire. Similarly, Kate Sutton's work on maker education, with its inherent support of maintaining indigenous and sometimes almost lost skills though cultural collaboration, then goes on to support the idea of how international pedagogy, this time originating in the USA, can be used here in

the UK to the benefit of all young learners of science. With this idea firmly in mind, it is great to see that this brings us full-circle with this issue's *In conversation...* piece, written by our own Leigh Hoath, which is an interview with one of the UK's key proponents of maker education, Dr Alison Buxton. Alison's reflections on challenging how we traditionally engage with science in classrooms and the benefits true inclusivity brings very much speak for themselves.

In issue 174 we attempt yet another fascinating learning journey in primary science and, as always, we are particularly grateful to all our contributing authors. 'Marginalised scientists', however, I think offers just that something extra as it generates insight into some truly inspiring work, not only in primary science but also in heralding how teaching science has its part to play in supporting a fairer, more considerately inclusive and diverse modern world.

Robert Collins

Teaching science has its part to play in supporting a fairer, more considerately inclusive and diverse modern world.