SHRINKING THE SKILLS GAP

Our industry knows the skills issue well – but what are we doing to change the future? And how can today's engineers support and encourage the engineers of tomorrow? *Susan Scurlock*, Founder of Primary Engineer, shares details of some of the work that is making a difference, and explains how the engineering community can help.

If one thing stands out from our experience at Primary Engineer, it's that kids don't need to be 'turned on' to the problem finding and solving skills that underpin everything in engineering. They need to be tuned in. We need to provide the ways and means that enable them, their teachers, parents and industry to identify and work together to retain the passion and mindset for creating and improving things. The career and life opportunities that this continual development can offer will be paid back in spades to all the parties involved – everyone wins.

The role of the teacher in this process cannot be overstated. So, when we consider programmes that incubate the engineering thinkers of the future, equal consideration must be given to providing the support that teachers need to feel comfortable delivering the relevant STEM content. So training is not just for future engineers but also for the schools and teachers. Without their enthusiasm and their penchant for identifying latent skills in budding designers, we won't be able to capture engineers in the making, and we can't nurture the next generation and support them through their educational journey.

Keeping and nurturing children's attention is harder than ever in a world obsessed with celebrity, which is nowadays seen as a career choice by many. We must give boys and girls the tools to think outside of the box. That's one of the reasons we created the competition: 'If you were an engineer, what would you do?'. This is the question we've posed to schools across the country for the past five years and last year we received over 49,000 responses. Each one showcased individual thinking on a grand (and often extravagant) scale! The competition is the result of joined-up thinking and working between teachers, children and engineers that sets free a creativity unbounded by perceived limitations of what is possible. The teachers engage with the programme, the children interview engineers then answer the one simple question, responding with their annotated design. The engineers then review and grade each design; it's simple. The cherry on the cake? University students on engineering courses choose a design to build working closely with the pupil and then sharing the process publicly.

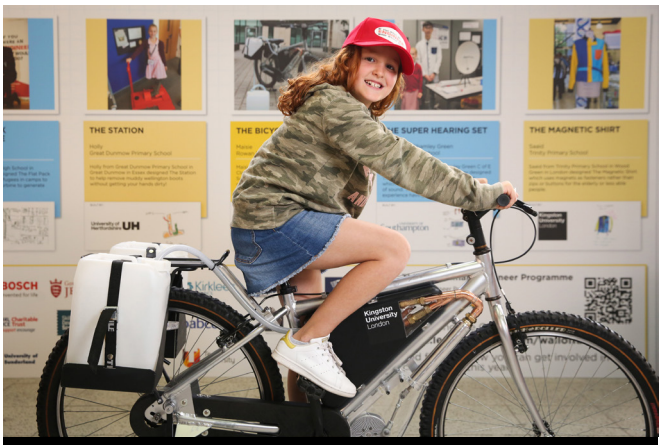
We know this works. We've seen it snowball and are party-to, along with industry, its continued growth. We've seen isolated projects grow into ecosystems – truly astonishing and inspiring results from teachers, children, engineers and universities working together. It's an approach that highlights how to bring about a fundamental change in engineering skills development on a huge scale.

Our vision for our programmes is that they are end-to-end and that any industrial company can be involved. And that is where you, today's engineer, can help us to support tomorrow's engineer.

Each industrial sector should be taking an active role in the future of their workforce, and we're starting to see how creating this environment is gathering momentum – so we're focused on continuing to build on that. We're continuing to join up the community, the programmes and, importantly, the infrastructure, so that kids don't unlearn their innate problem solving skills, they all have the opportunity to continue to build the skills that underpin the practical application of them. It's not merely a case of introducing kids to engineering careers, though that is a good start, it's a matter of introducing them and lighting an attainable, consistent and progressive path, all the way to a rewarding career.

Everyone is welcome in engineering the future, and it's down to all of us to build that future. If you want to know how you or your company can be involved, get in touch via our website. And if you have an idea about how we can do more, tell us.

www.primaryengineer.com



Maisie Crook from Surrey was just six years old when she designed the Bicycle Sucker to suck water up from a well using the mechanics of the bike as power.