



"They'll have that option to say 'hey let's have a go at doing this,' but it doesn't neglect the ones who aren't ready for Python. They can carry on with block coding and that gives everybody the ability to access the robotics and the programming at their own comfortable level!"

- Shaun Mitchell on LEGO® Education SPIKE™ Prime's Python extension.

Shaun Mitchell, one of LEGO® Education's newest Master Educators, teaches design and technology at Endon High School in Staffordshire, England. In the last five years he's grown the program, implementing cutting-edge tech like 3-D printers, laser cutters and of course, robotics with LEGO® Education solutions. "LEGO is at the core of everything I have done over the last 5 years and has become a vital part of not just our KS3 and GCSE curriculum, but has transformed our pupil's extracurricular lives through FIRST® LEGO League," says Shaun. Initially LEGO® MINDSTORMS® Education EV3 helped to cultivate an environment of exploration rooted in prototyping, developing, and testing creations that address real world problems. This year when he was ready go deeper, especially within the context of the curriculum he was thrilled to get his hands on the new LEGO® Education SPIKE™ Prime and he was even able to deliver kits to students' homes so they could engage remotely while in lockdown due to the pandemic.

Using apps like Zoom and Microsoft Teams Shaun was able to allow students to brainstorm, map ideas, and work collaboratively. The addition of SPIKE Prime unlocked limitless possibilities as students were able to combine forces building multiple components of the same models. Later they'd come together on Teams to share how the various components would work together and the implications that had for the problem they were trying to solve. Between the Scratch-based coding and the step-by-step online building and coding instructions, Shaun says SPIKE Prime is so engaging and easy for the students to get started with that sometimes he feels redundant. "I can just roam around the room facilitating with any students who may struggle, and taking photos and videos of the brilliant things they're all creating."

Shaun points to the coding progression as a great illustration of one things that makes SPIKE Prime a solution for all learners and a great transitional tool. His students have been able to polish their skills and build confidence using the intuitive Scratch-based coding and the Python extension offers students who are ready the opportunity to develop new skills and try something different.

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With so many students learning in either virtual or hybrid settings, finding opportunities for playful hands-on experiences is vital. Shaun agrees and from his point of view if schools have the ability to provide opportunities like sending home kits whether it’s SPIKE Prime, EV3, or something else, then they have to take them. The kits represent an opportunity for kids to stay engaged and excited about STEAM learning, to access their natural curiosity and drive to explore how things work rather than just having a person on a screen explaining it to them. “Almost every kid is going to engage a little bit more intently if they can wrap their head around a concept in a tangible way,” says Shaun, adding that his students get a sense of ownership if they’re the ones building, designing, and thinking about the work. It’s the kind of engagement that leads to increased confidence in the STEAM skills Shaun’s lessons are designed to develop.

In terms of curriculum, Shaun is looking forward to the new doors SPIKE Prime is going to open when it comes to communication skills, iterative thinking, and collaboration. And while it’s no surprise that as a design and technology teacher he’s excited about the engineering and robotics possibilities, you can hear his enthusiasm and energy when he talks about the fun and playful nature of SPIKE Prime. “I think it just looks fantastic even down to the colors and elements. It just gives him a bit more, let’s call it joy!” Shaun says that joy translates to his students and he can see that as soon as they start looking at it they’re already thinking about what they can construct and how they can play with it. “They’re happy because I suppose they see it as a toy to start with, that gives them confidence, and then they realize actually this can do some pretty serious stuff!” And we’re looking forward to seeing what kind of serious stuff his students do next!



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