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Creating space for e-textiles

How e-textiles could make computing more creative, hands-on and inclusive for more learners.

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Sewing and computer programming are not two things most people expect to see side by side in a computing lesson. Yet one of the ongoing challenges in computing education has always been finding ways to pull learners away from the screen and into more hands on creative experiences.

While the BBC micro:bit and its many predecessors have helped make this possible, projects can often start to follow the same patterns and appeal to the same groups of young people. E-textiles offer a different route into computing by combining coding, electronics and textile design in ways that feel creative, personal and expressive.

Although the idea of combining sewing with programming may seem unusual at first, e-textiles have existed for more than a decade. One of the earliest academics to champion the idea was Leah Buckley from UC Boulder, who developed the LilyPad Arduino, a programmable PCB designed to be sewn directly into fabric.

In March 2026, I presented work at the WIPSCE conference in Aachen exploring how the BBC micro:bit could be used as a foundation for e-textiles in schools. Our study found that e-textiles can provide an engaging and accessible way into computing for learners who may not always see themselves as ‘good at computing’. Getting hands-on with circuits can also help develop skills that Jennifer Rode of UCL describes as ‘Computational Making’. As an alternative to the more familiar idea of computational thinking, computational making focuses on creativity, aesthetics, understanding materials and exploring multiple forms of representation.

As part of the Creative Computing Institute, I am always looking for new ways to combine creativity and computing. It has been exciting to see how e-textiles could help open up the world of computing to a
wider and more diverse group of young
people.