

Sew What? Engineering Fashion in the Classroom

Kate Miller

Photo Credit: University of Wisconsin-River Falls Upward Bound program

What happens when you ask students to engineer clothing that responds to the world around them?

In this video, Senior Fellow Kate Miller describes a wearable electronics unit that she and other teachers implemented at Upward Bound, a summer camp aimed at preparing first-generation and low-income high school students from the Minneapolis/St. Paul area for college. Students engaged with the engineering design process as they drafted, sewed, optimized, and presented a unique garment. Students also learned to program lights to respond to sensory input, and attached these to the clothing itself. The project culminated in a fashion show, both in the light and the dark.

“This [summer] project was an example of real, authentic, get-your-hands-messy, make-mistakes, not-quite-sure-where-we’re-going-to-end-up sort of learning,” and it stuck with the teachers well into the school year.

Watch this video on our website to see the project’s progression and learn about the teachers’ thoughts and reflections, including:

- how students’ authentic learning is a reflection of the teachers’ authentic learning,
- a realization of preconceived gender bias around who can do engineering, and

- how this project has inspired similar ways of teaching and learning in more traditional classroom contexts.

Watch Sew What? Engineering Fashion in the Classroom at knowlesteachers.org/kaleidoscope.

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