Engineering Inquiry for all at Nedlam’s Workshop
Brian Gravel, Tufts University
Acknowledgements

The students at Malden High School

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Nedlam’s Workshop
How do you empower youth to solve the problems in their lives?
Engineering Inquiry
Engineering Inquiry
to empower
students who are low-tracked
Engineering Inquiry

to empower

students who are low-tracked

to address

“pressure points”
How can a *makerspace* change how people view the resources that *all students* bring to school as academically valuable?
Malden High School’s
Wood Technology Shop
Nedlam’s Workshop
Samuel and Fabiola: Charging my cell phone in school
Email from a principal at Malden High School:

I visited the class yesterday and was so impressed by the level of engagement that you and the teachers have created. One young man [Samuel] said, "Mr. Lamar, let me show you how smart I am." Thank you so much for creating an environment where kids, who may not feel "smart" all the time, can show off how smart they really are! It really is great to see.
Mr. G

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Mr. G

f(x)
Mr. G

Leverage students’ everyday knowledge of tools

Changing what knowledge “counts” in math class

Seeing low-tracked students in new ways
What we’ve learned:

Makerspaces provide an opportunity to redefine how we do inquiry in school

Empowering youth to solve problems in their worlds can broaden and redefine participation

Focus inquiry on the “pressure points” of one’s life - understand and address real problems

What we need to do:

Provide teachers with opportunities to do inquiry themselves

Develop supports (e.g., problem framing, documentation) for students to solve the complex problems they identify