Good & Bad News in STEM Education

[STEM = Science, Technology, Engineering, and Mathematics]

Good News

- There is broad agreement on the "canon" of core skills and ideas.

Good News/Bad News

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BUT

- Students can get focused too much on learning within their own disciplines and within the controlled classroom environment.

Good News/Bad News/Our Solution

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Our approach:

- Reach across disciplines to take on risky, open-ended problems of unknown difficulty.

Good News

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Our approach:

- Emphasize experimentation, so students experience the excitement and frustration of getting something to work.

Good News

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BUT

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Our approach:

- Focus on applying core scientific ideas in new ways, rather than advancing a particular professor's individual research program.

Good News

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Our approach:

- Give students a broad perspective on how their skills apply to today's technological challenges.

Our Goal

Since we see our approach as complementing, not replacing, the traditional in-depth disciplinary approach, we hope it will become a long term, integrated component of science and math education at Middlebury, and serve as a model for other institutions as well.

This year's pilot has offered us a unique opportunity to get this program off the ground.