An Energetic Approach to Teaching

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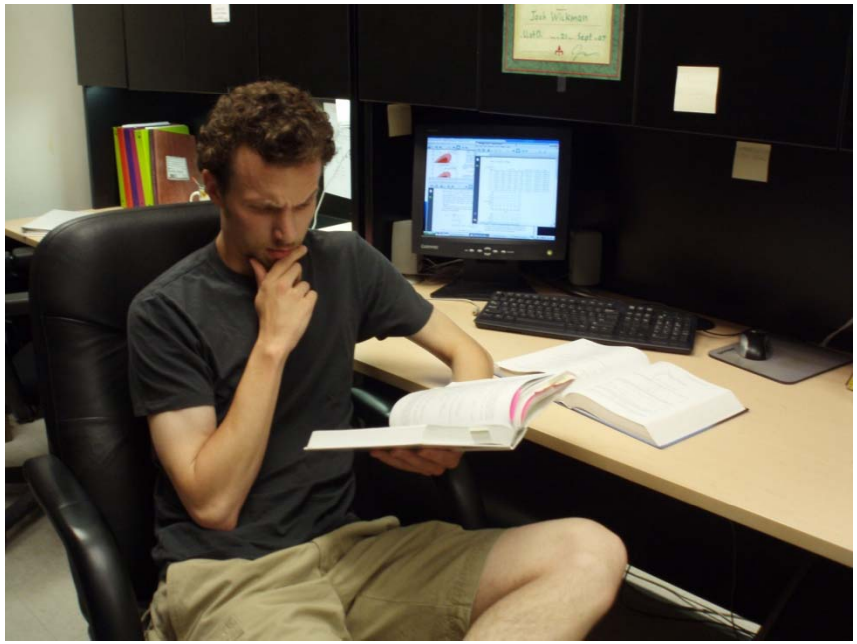
Outside the Classroom

- PhD student in Physics and Astronomy
- Research in particle theory and cosmology (thesis advisor: Qaisar Shafi)



Inside the Classroom

- 11th grade Integrated Science
  - Working with Tim Brewer, Jessica Jackson, and Dana Boltuch

Inside the Classroom

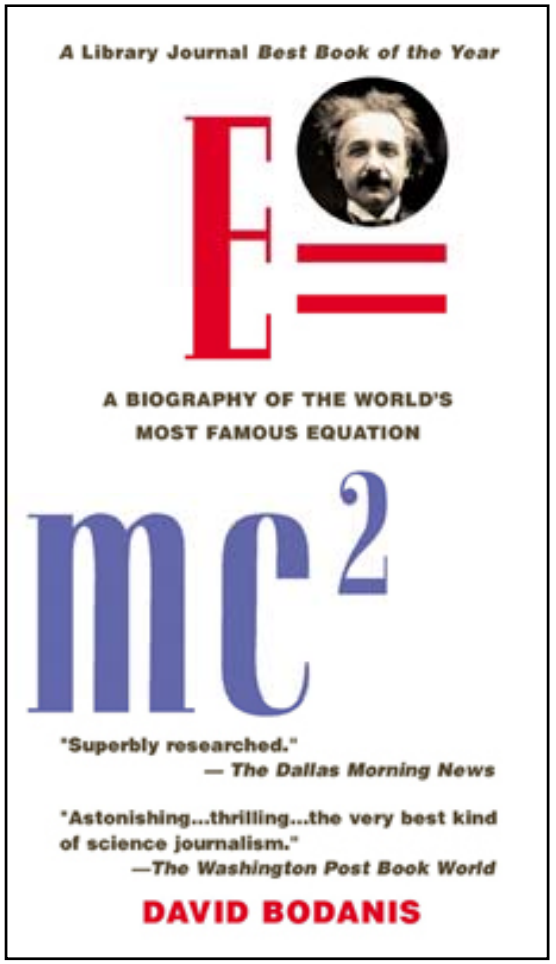
- My job: resource in the classroom

Why Focus on Energy?

- Astronomy
  - Stellar fusion
  - EM spectrum
- Ecology
  - Alternative energy
  - Energy hierarchy between trophic levels
- Underlying principle

Launching Point – $E=mc^2$ Book

- Different perspective
- Cross-curricular approach
  - English
  - History
  - Literacy
- Demystifies Einstein's work



Follow-Up – Hands-On Exploration

- Energy stations
  - Many different forms of energy transfers
- Guided inquiry

Results and Conclusion

- Outcome
  - Better grasp of energy
  - Ties many concepts together
- Challenges
  - Covering all required topics in a timely fashion

Acknowledgments

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- St. George's Technical High School science teachers *(especially Tim Brewer and Jessica Jackson)*
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